

#18<sup>4</sup>  
3.25.03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Confirmation No. 7022  
Mitsuaki OSHIMA et al. : Docket No. 2000\_1328  
Serial No. 09/672,946 : Group Art Unit 2634  
Filed September 29, 2000 : Examiner A. Le  
COMMUNICATION SYSTEM :

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

**SUBMISSION OF FORMAL DRAWINGS**

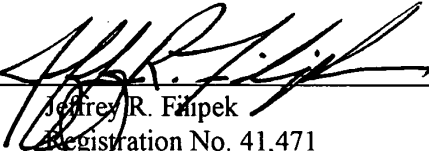
Assistant Commissioner for Patents,  
Washington, D.C.

Sir:

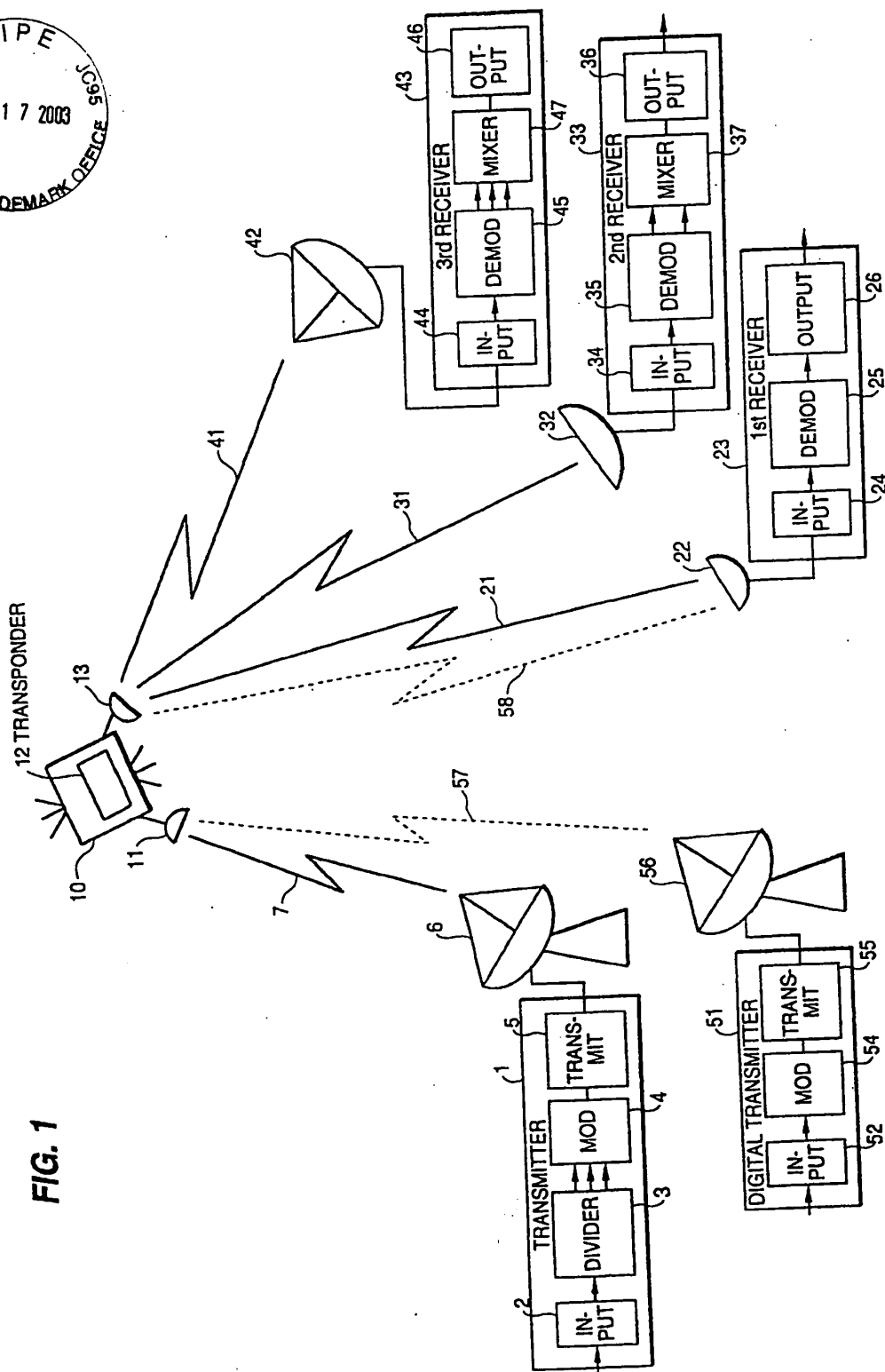
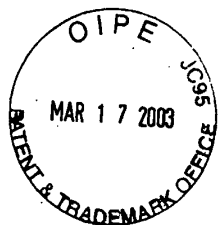
As required by the Examiner in the Office Action mailed September 16, 2002, 178 sheets of formal (8½ x 11) drawings (Figs. 1-179) are submitted herewith.

Respectfully submitted,

Mitsuaki OSHIMA et al.

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March 17, 2003



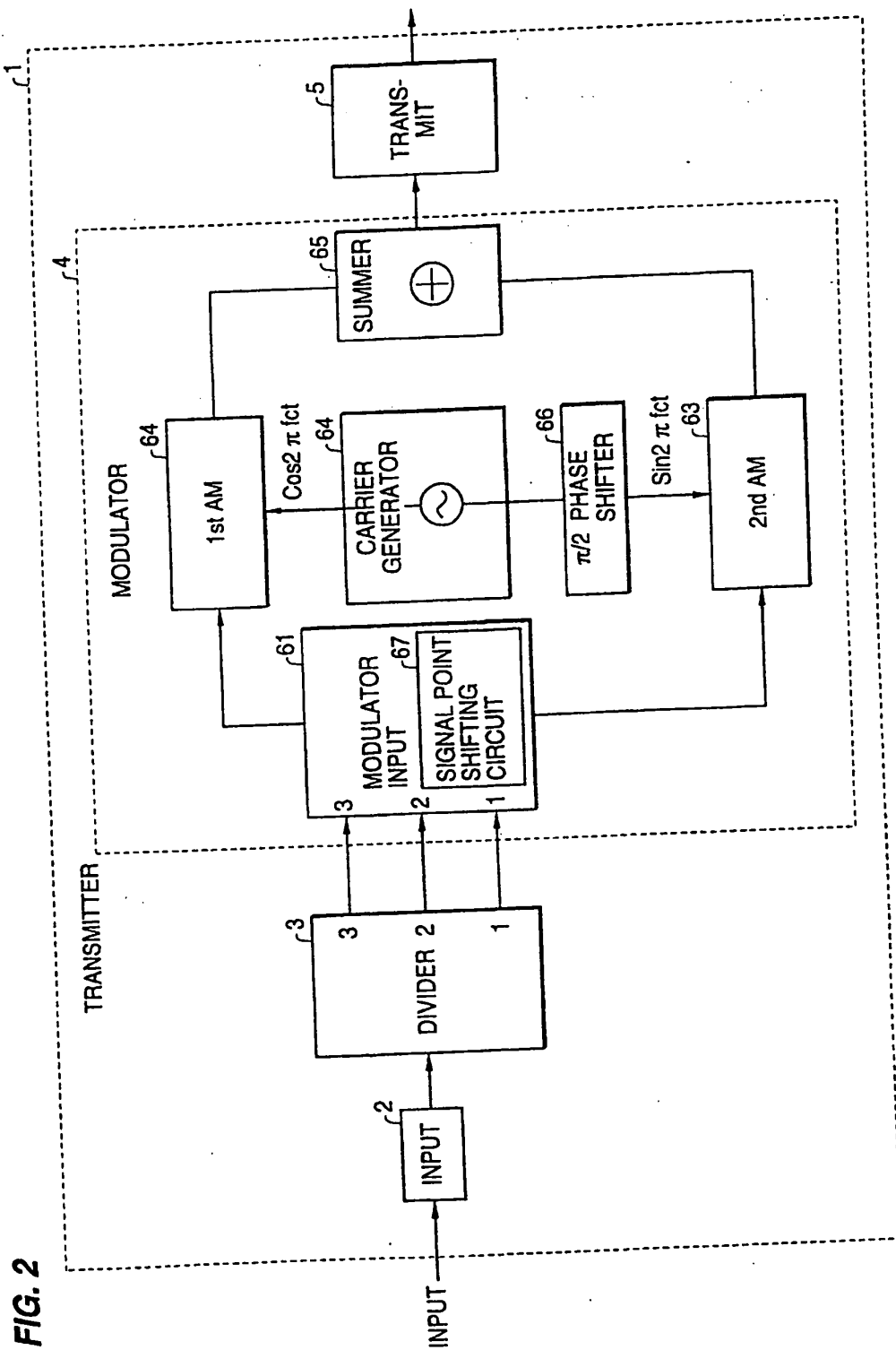




FIG. 3

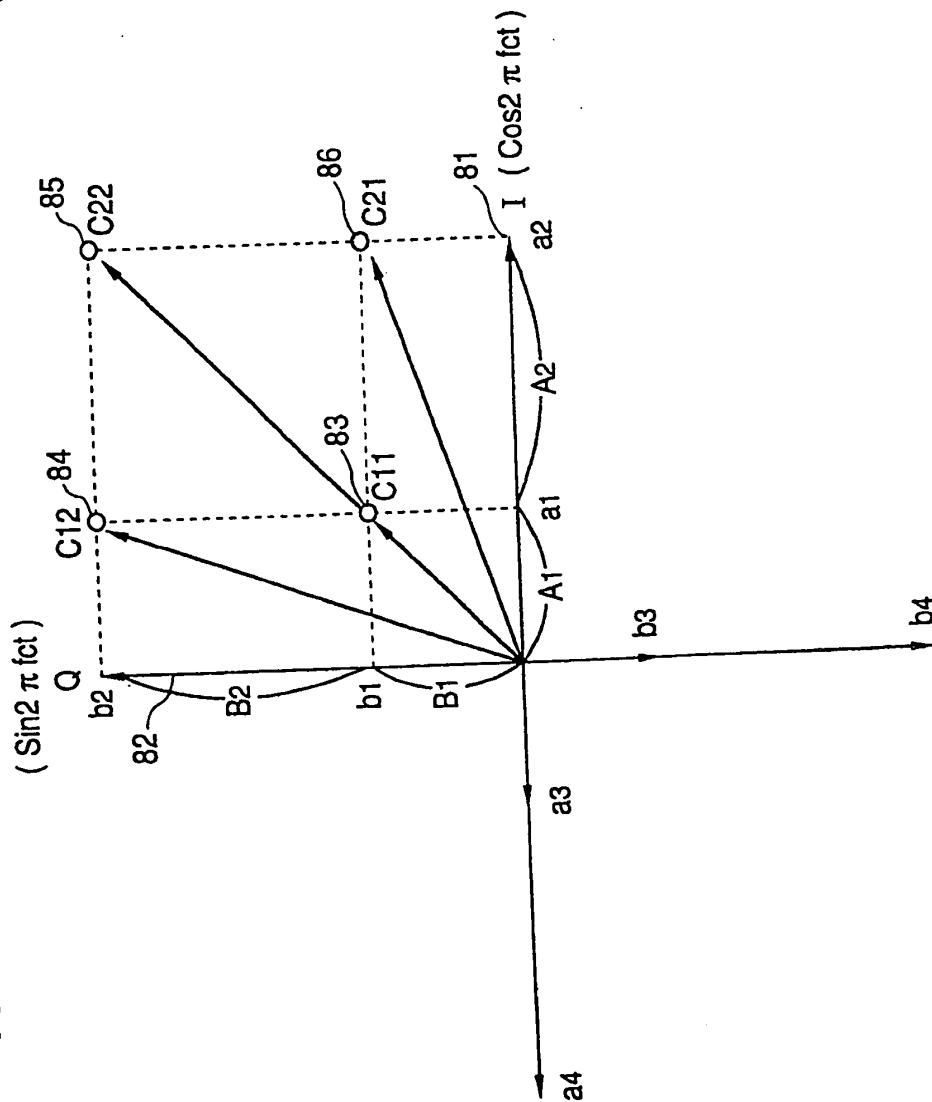




FIG. 4

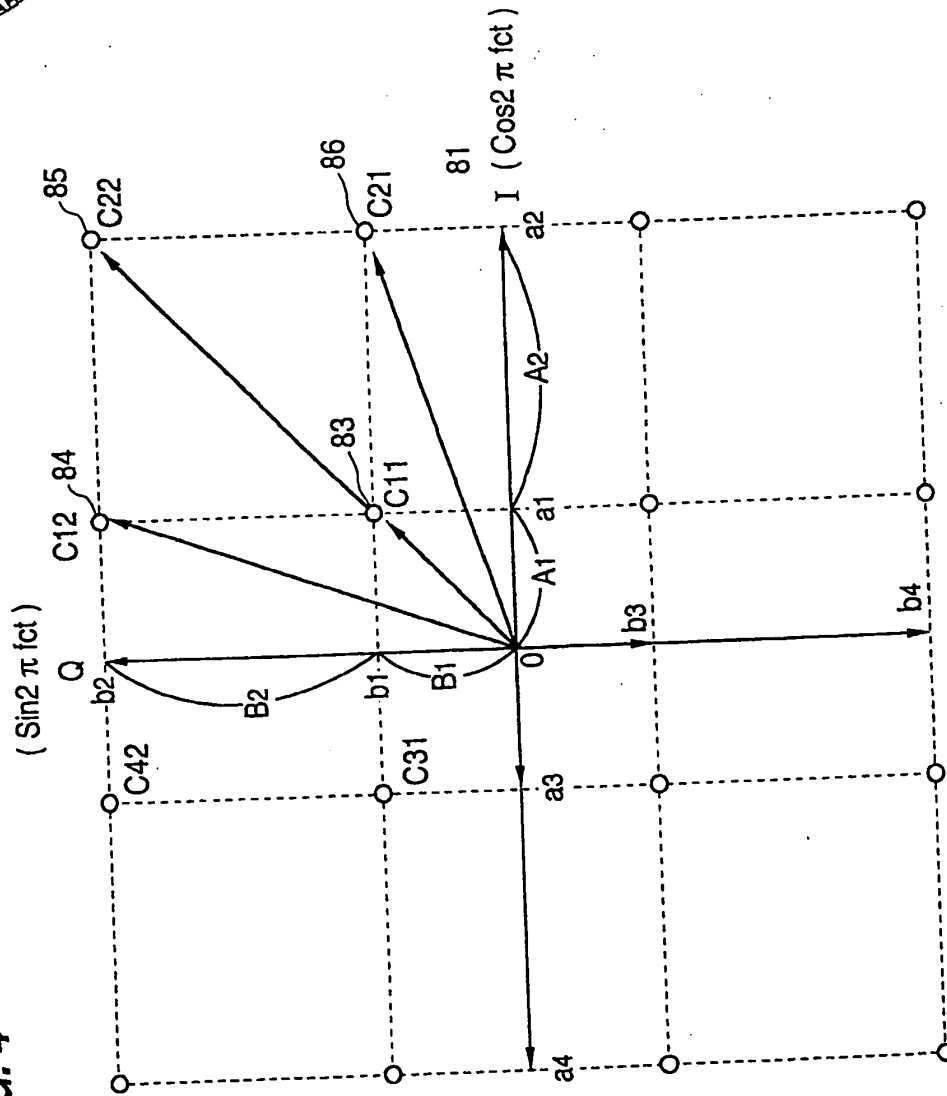




FIG. 5

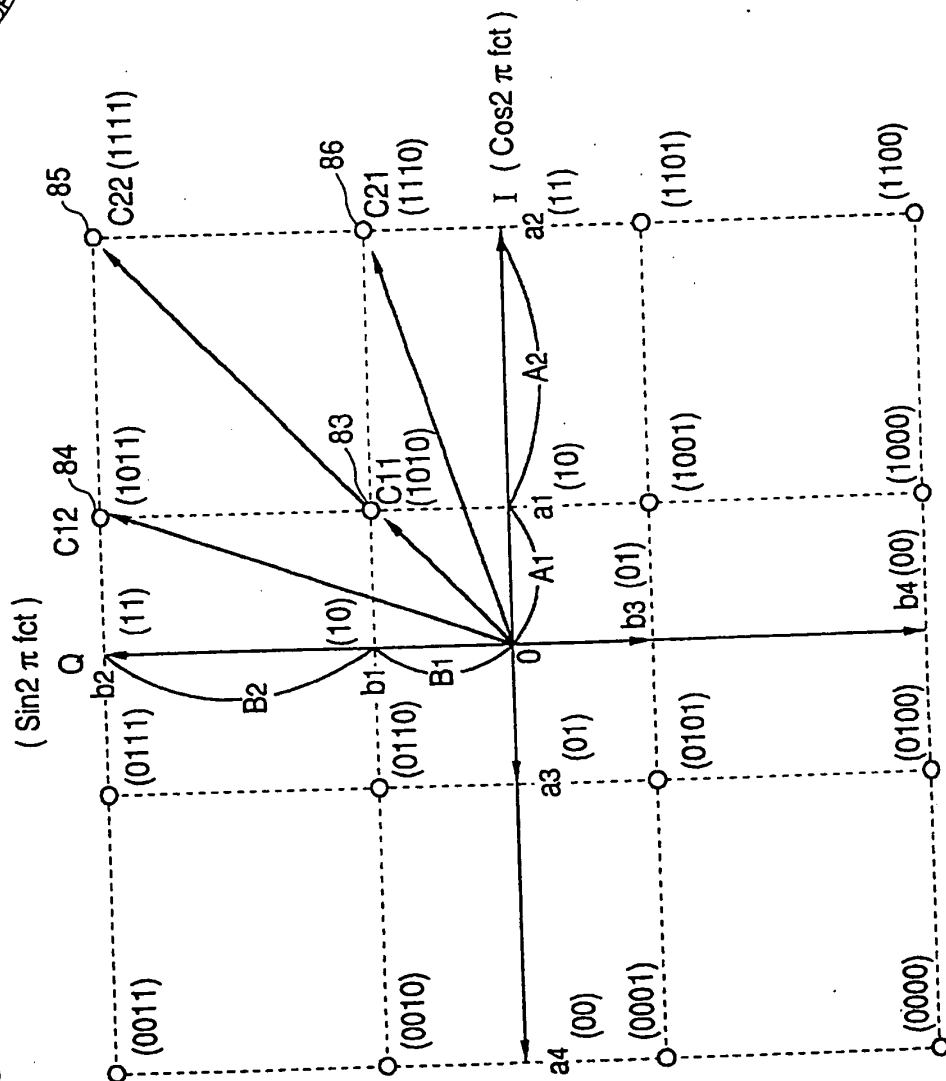




FIG. 6

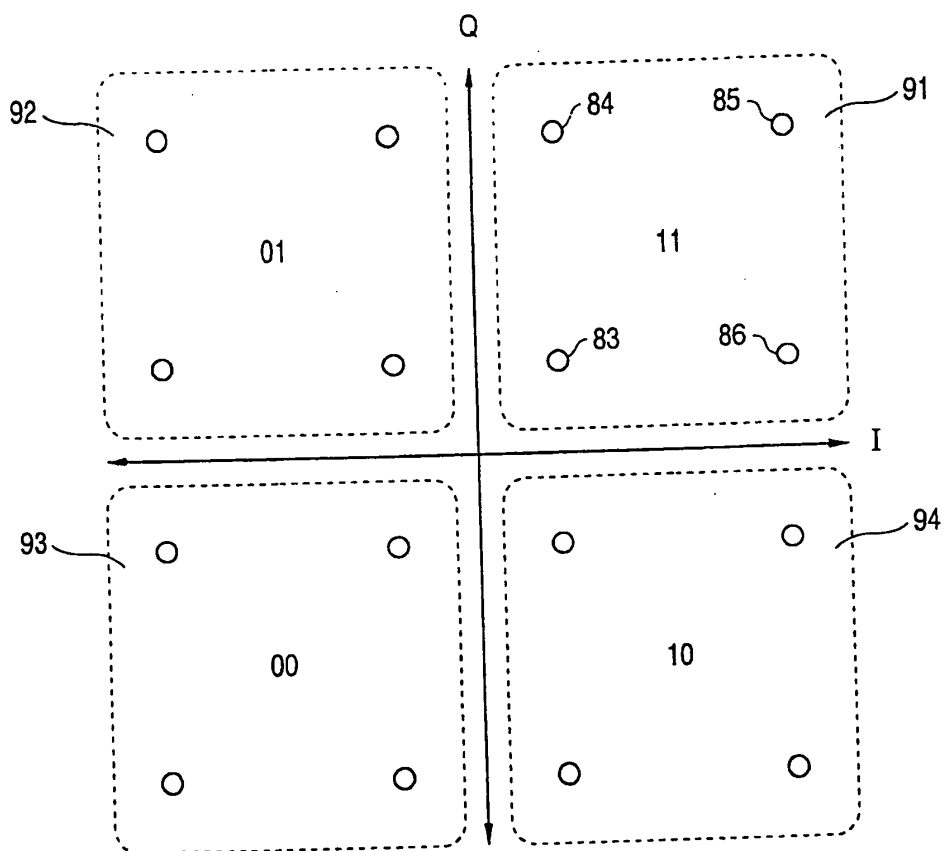
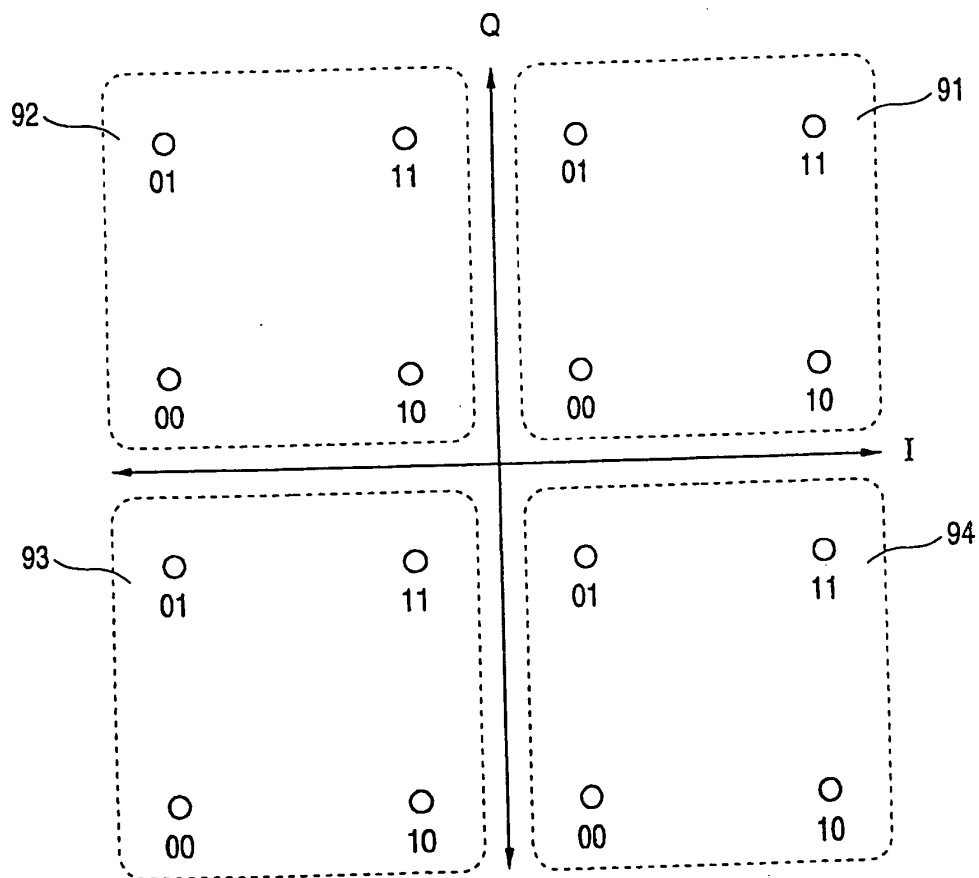


FIG. 7





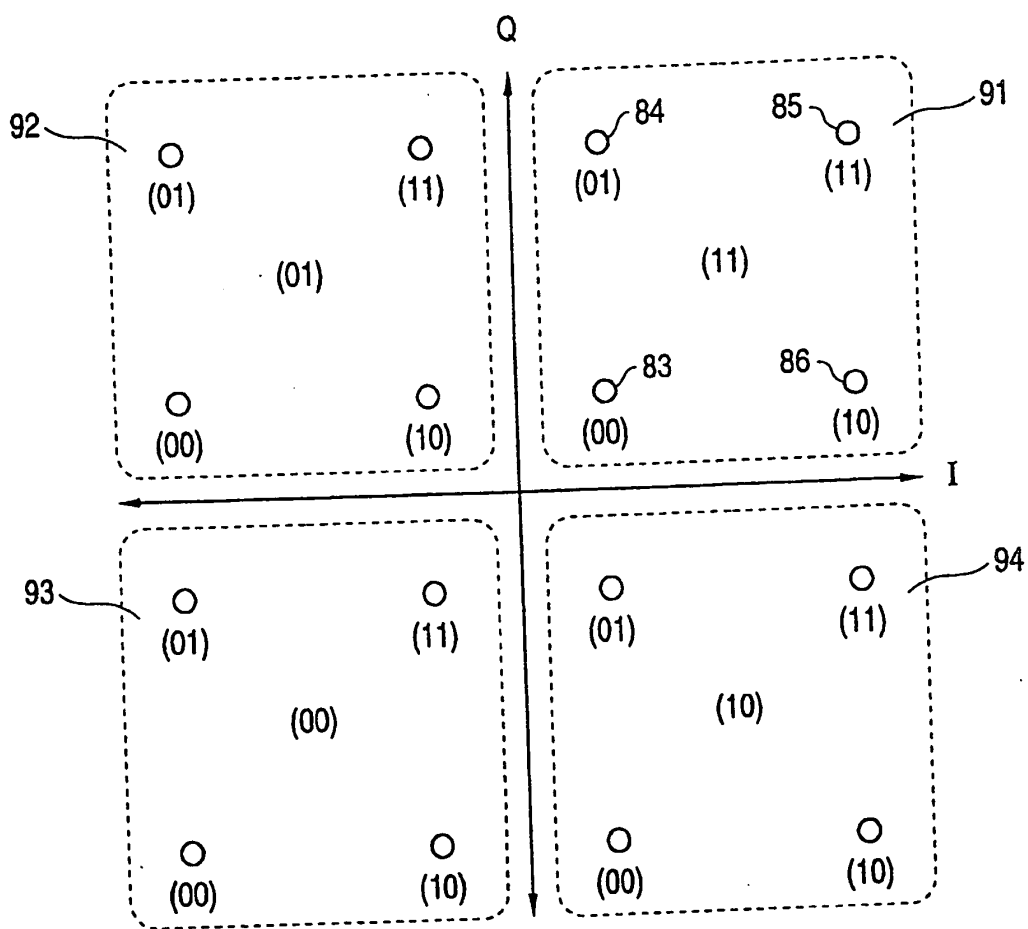
**FIG. 8**

FIG. 9

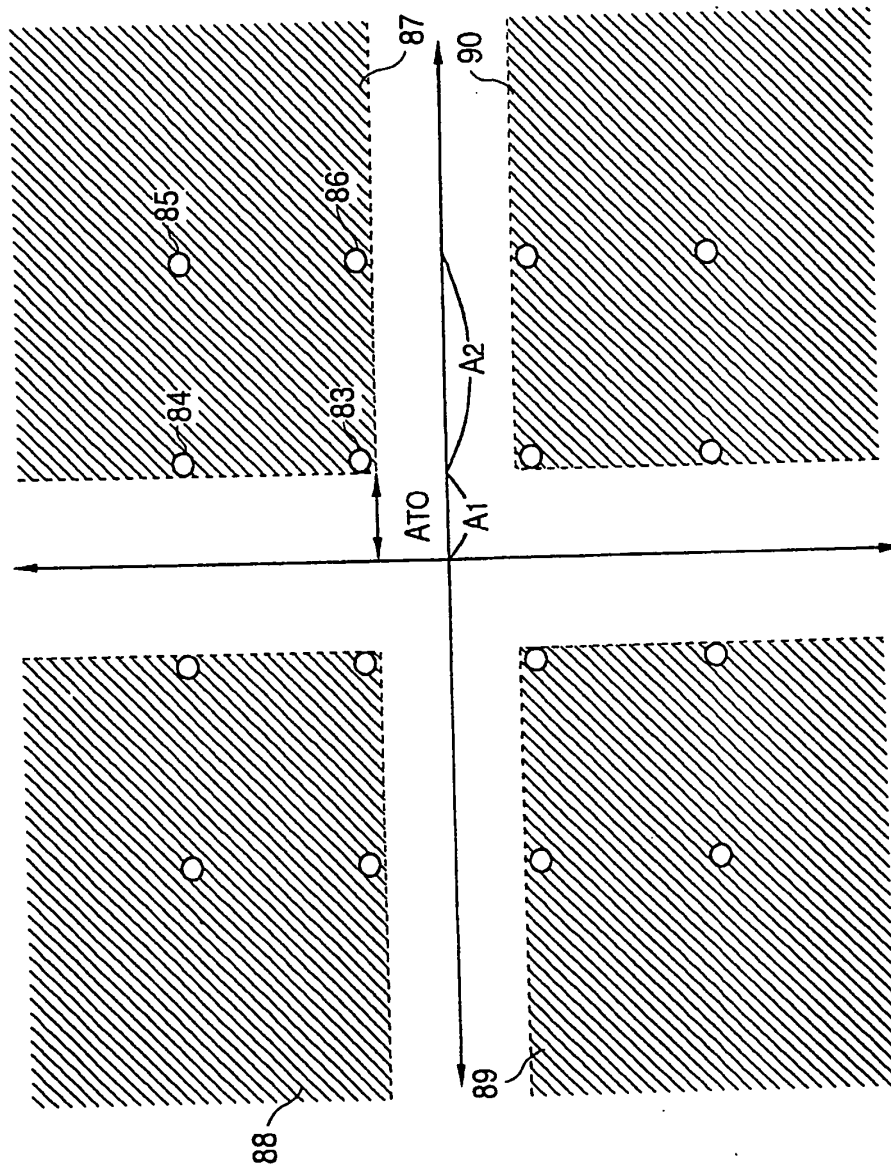


FIG. 10

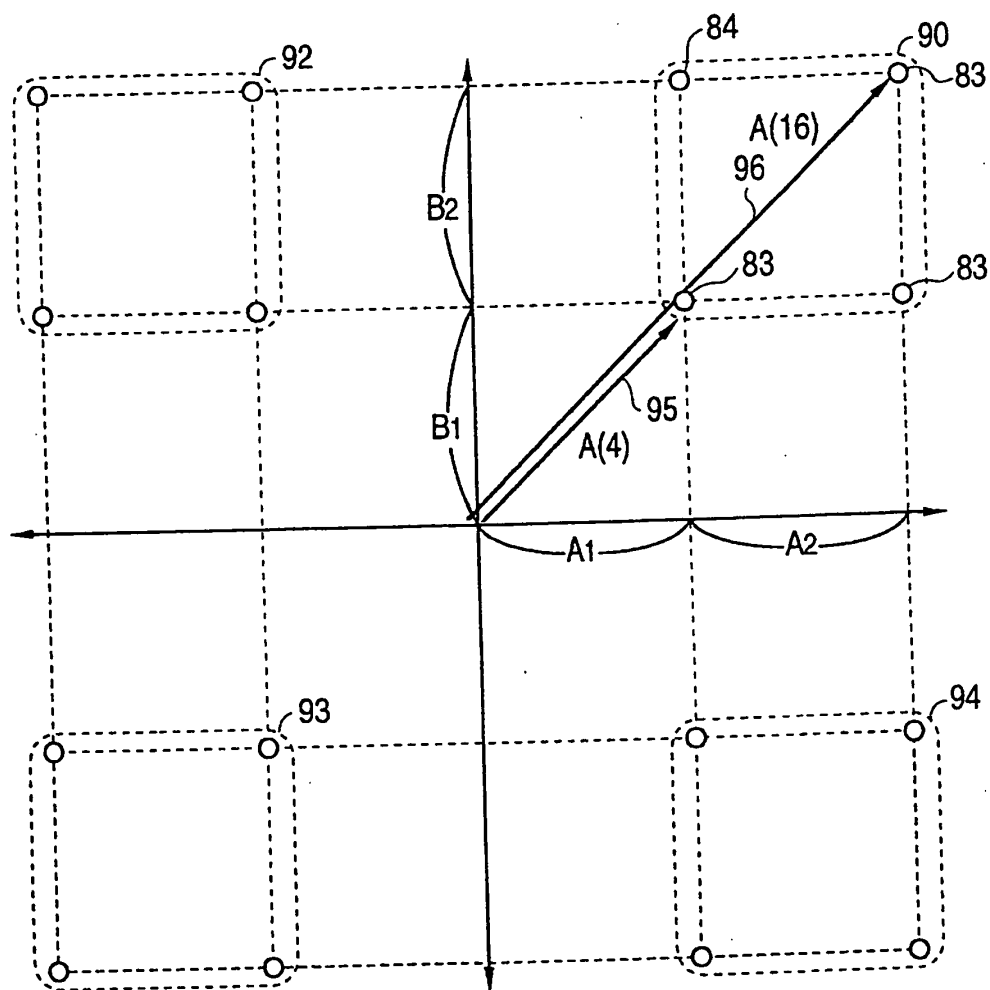


FIG. 11

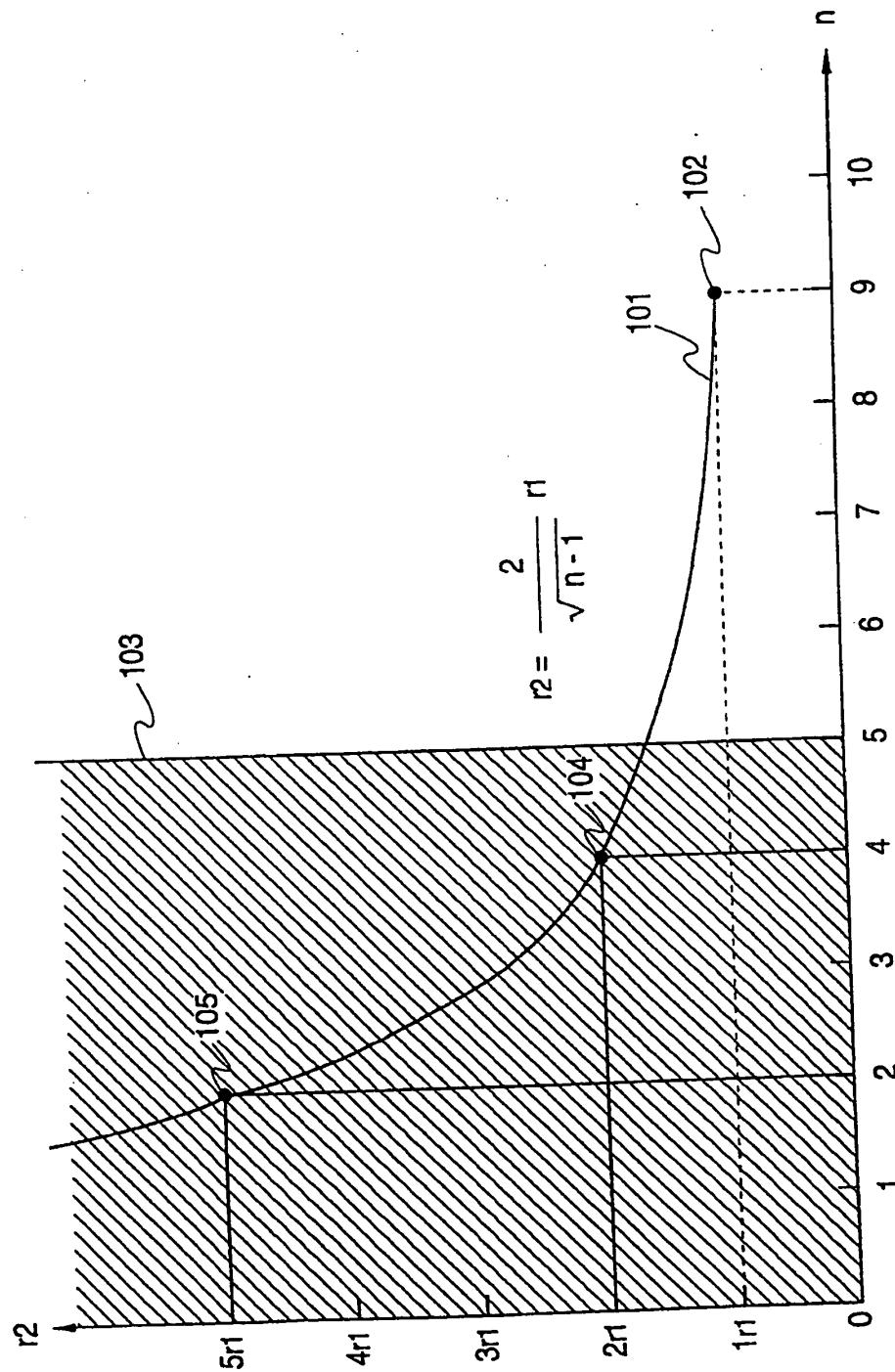


FIG. 12

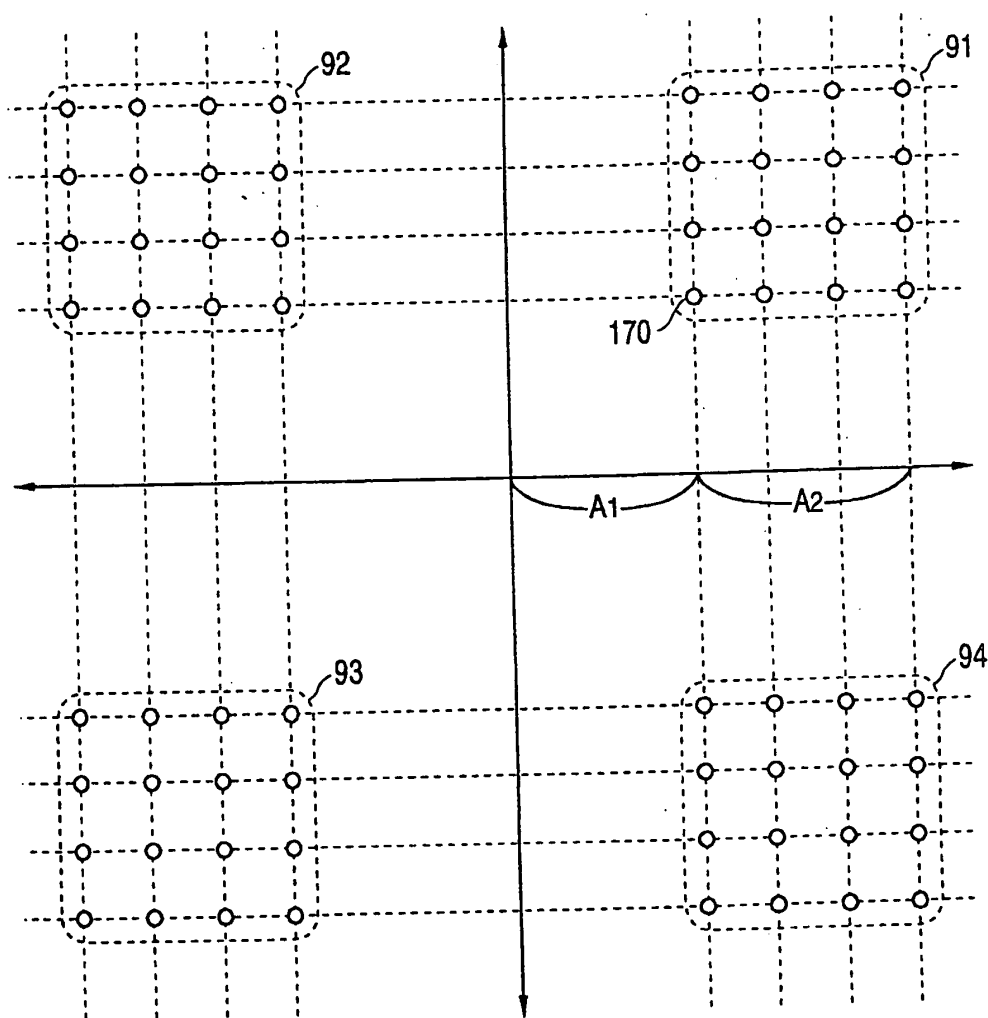
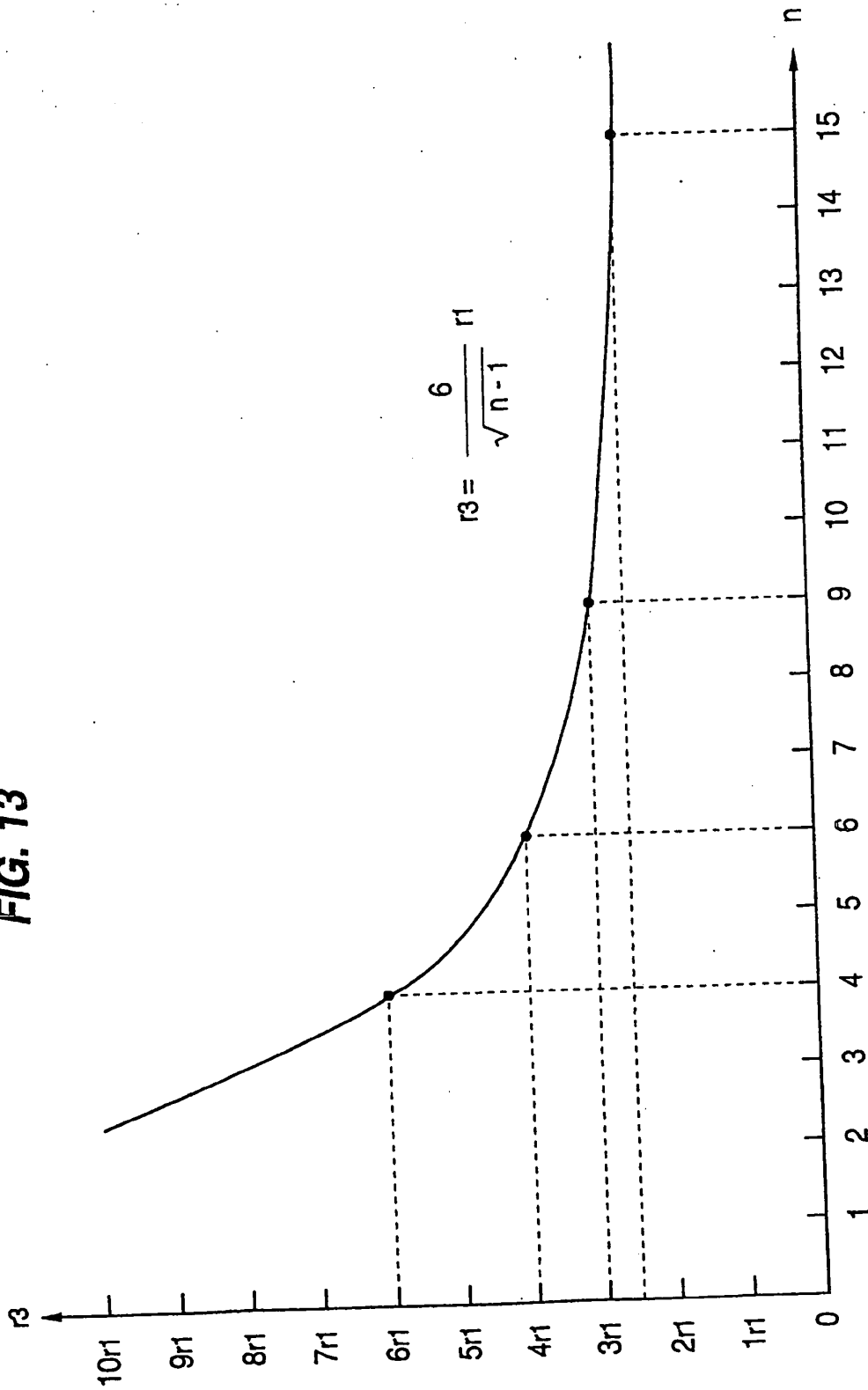


FIG. 13



**FIG. 14**

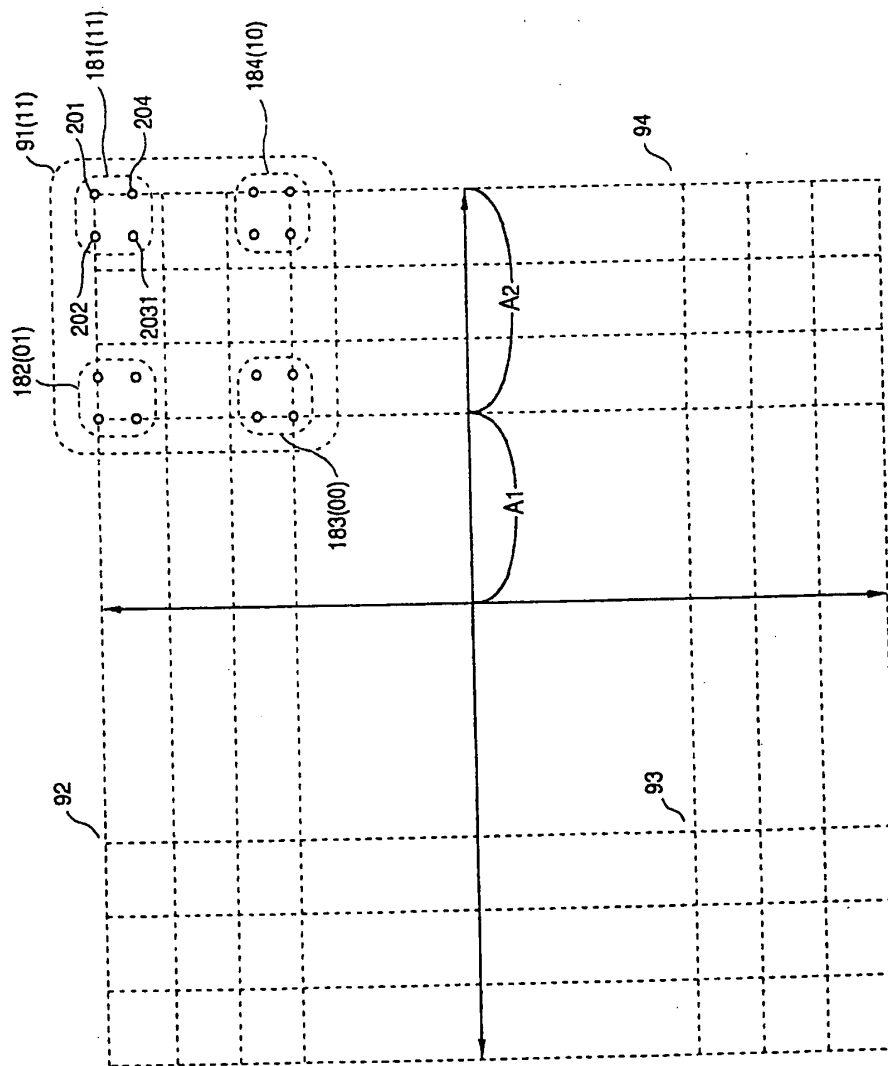


FIG. 15

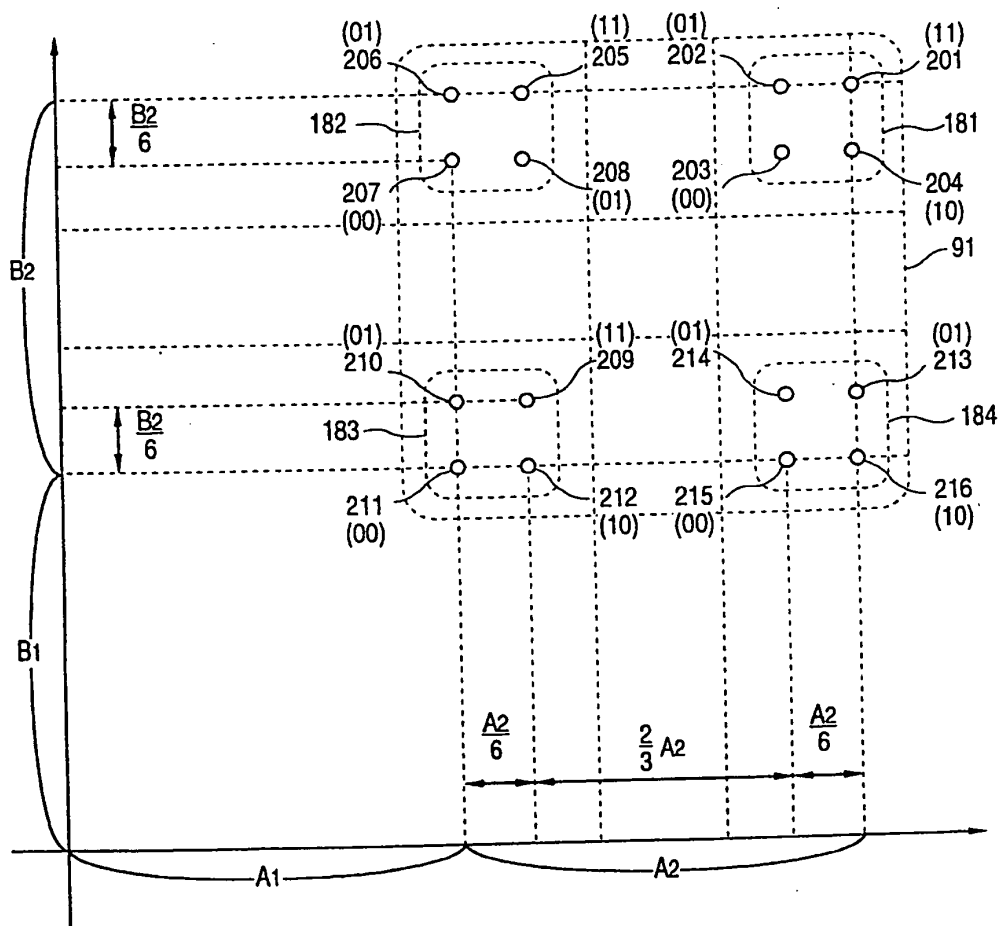




FIG. 16

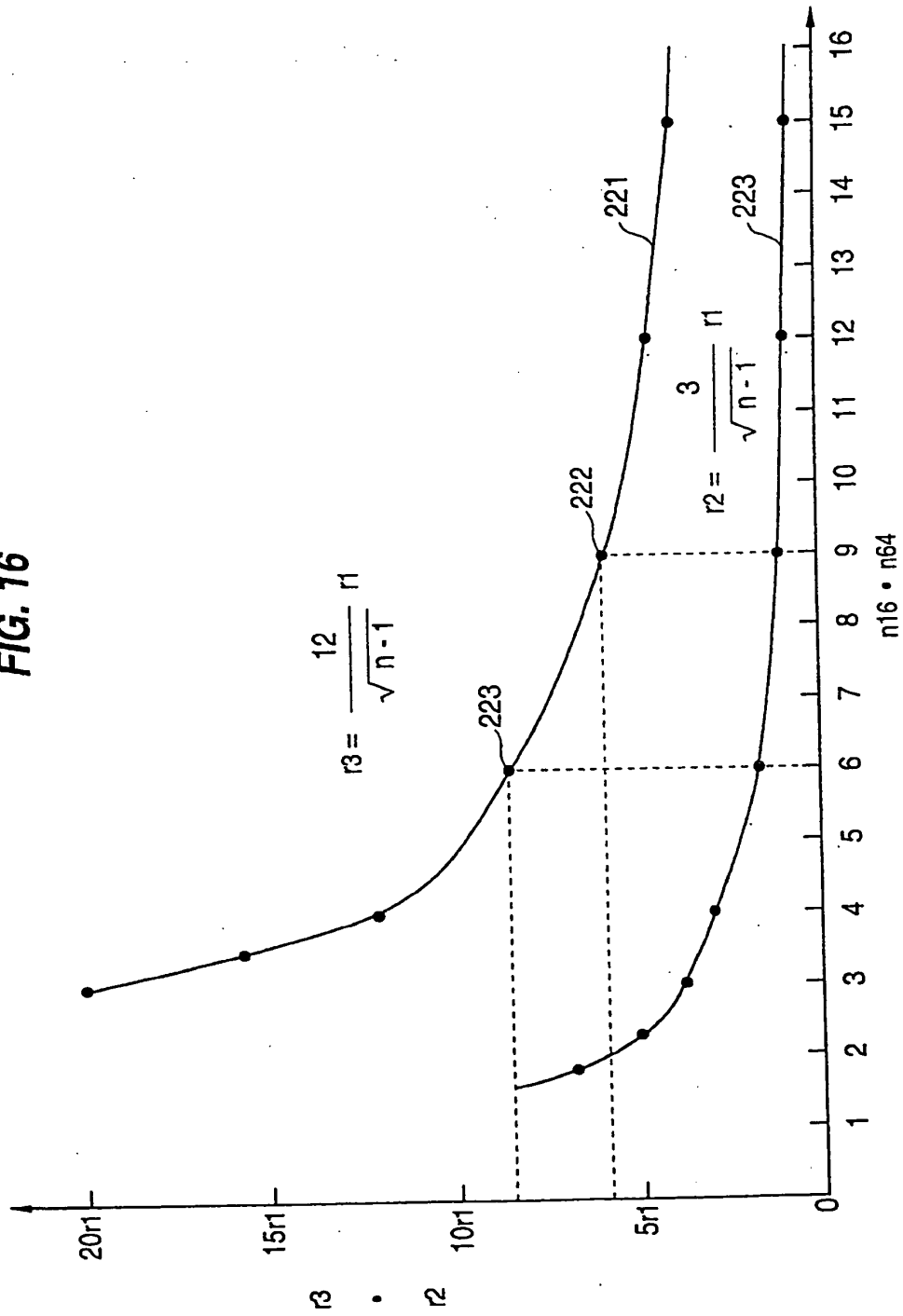


FIG. 17

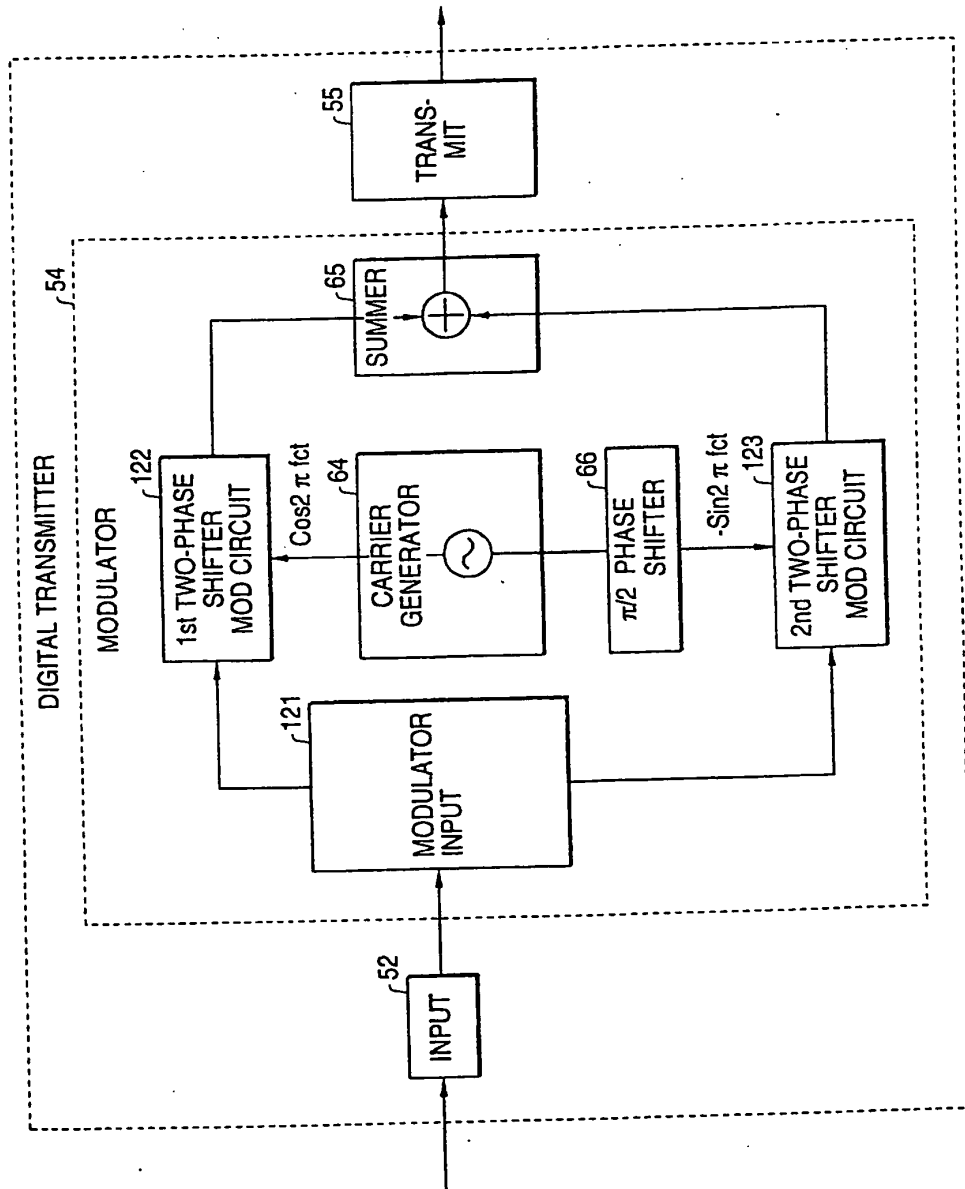


FIG. 18

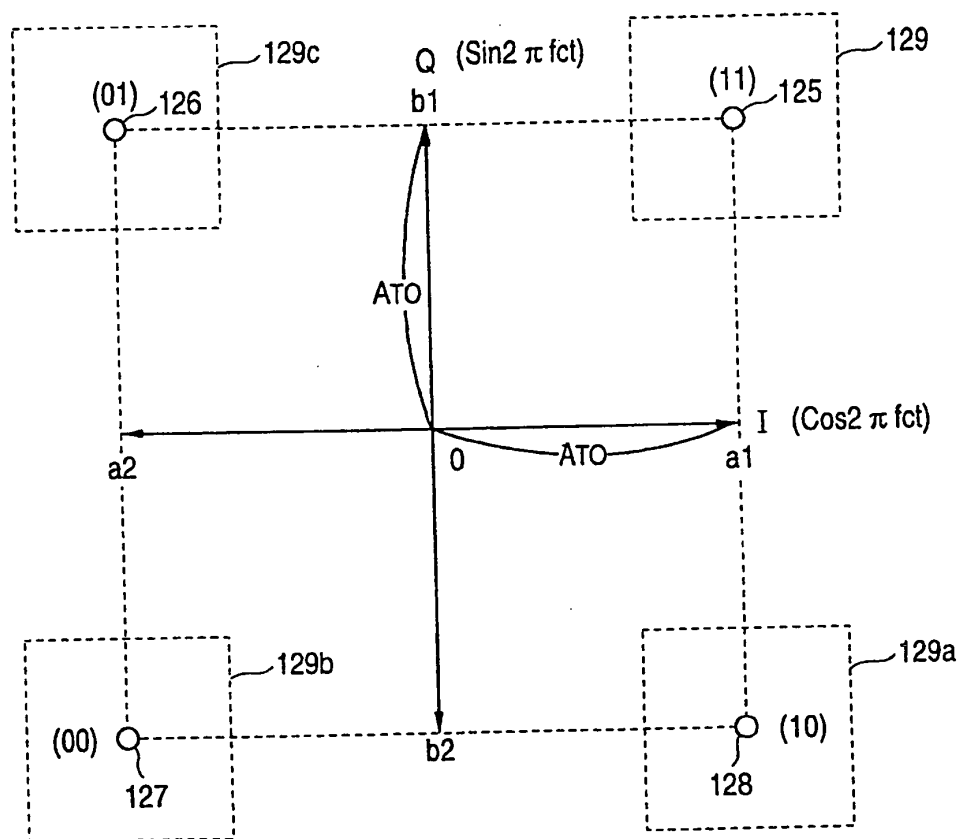


FIG. 19

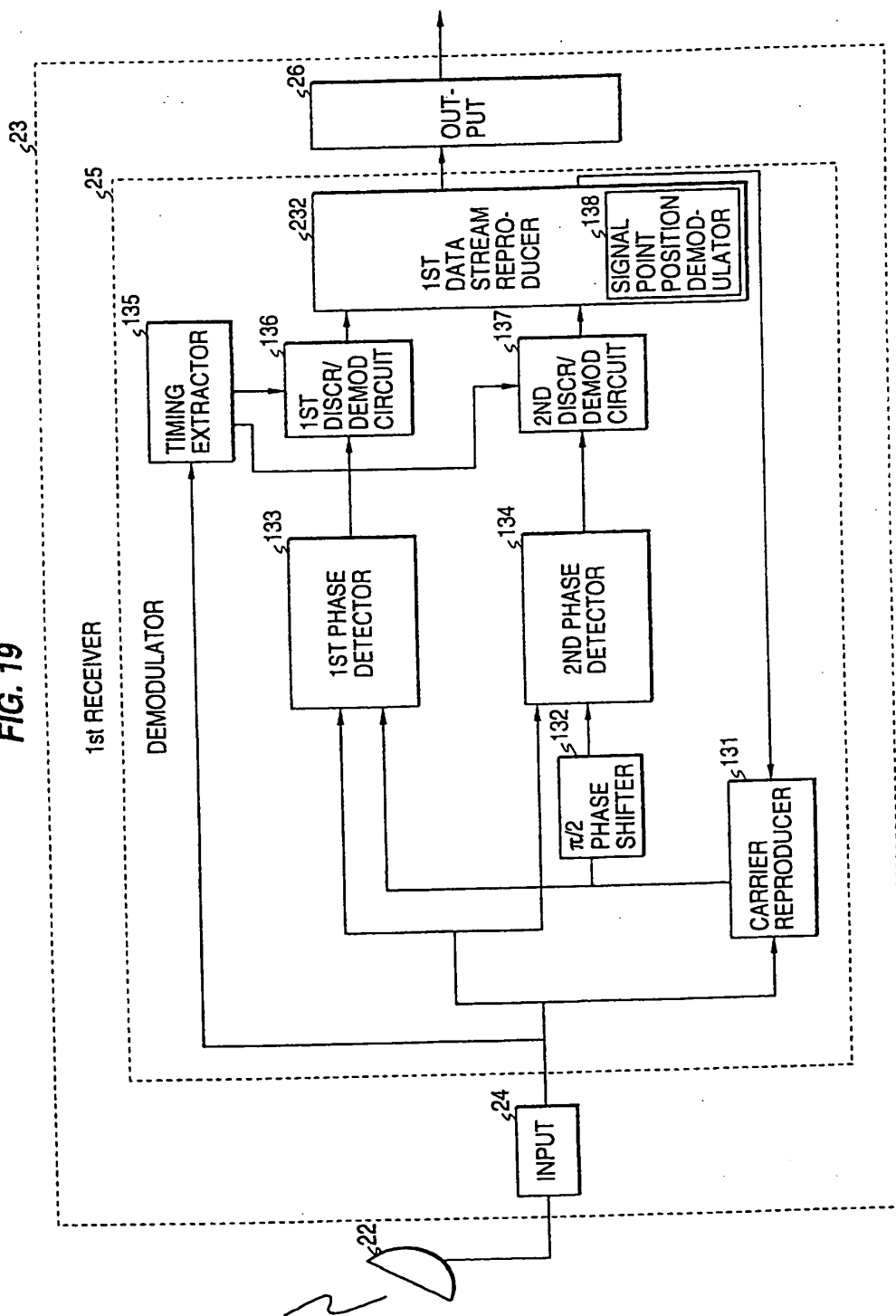


FIG. 20

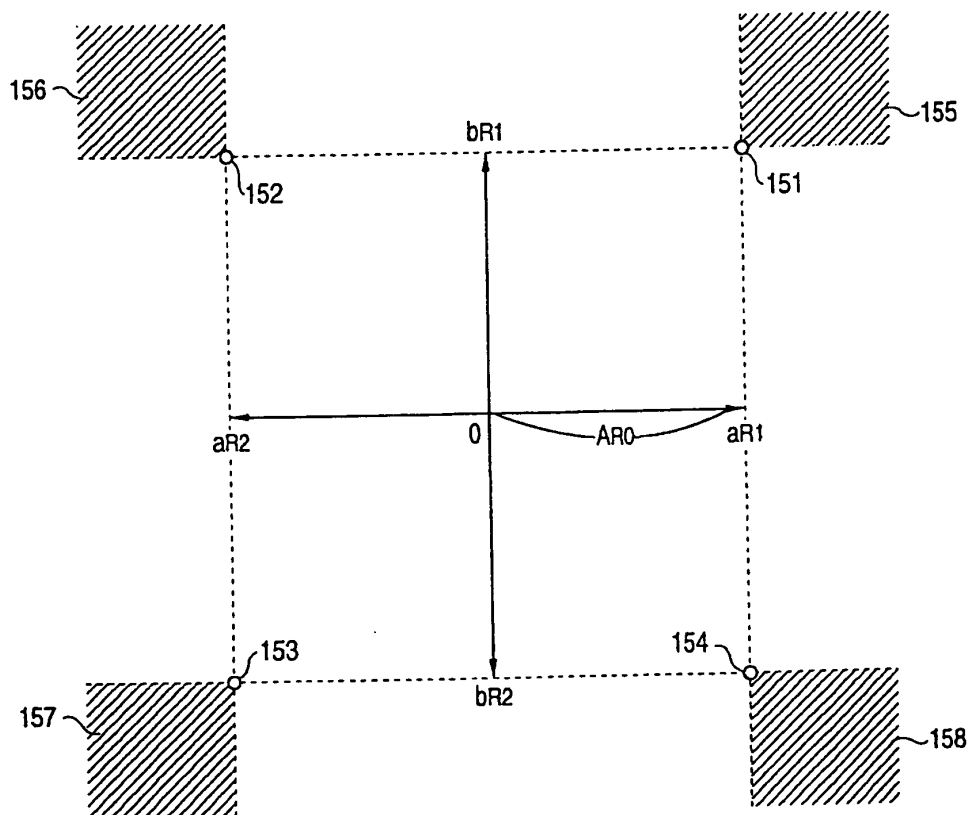


FIG. 21

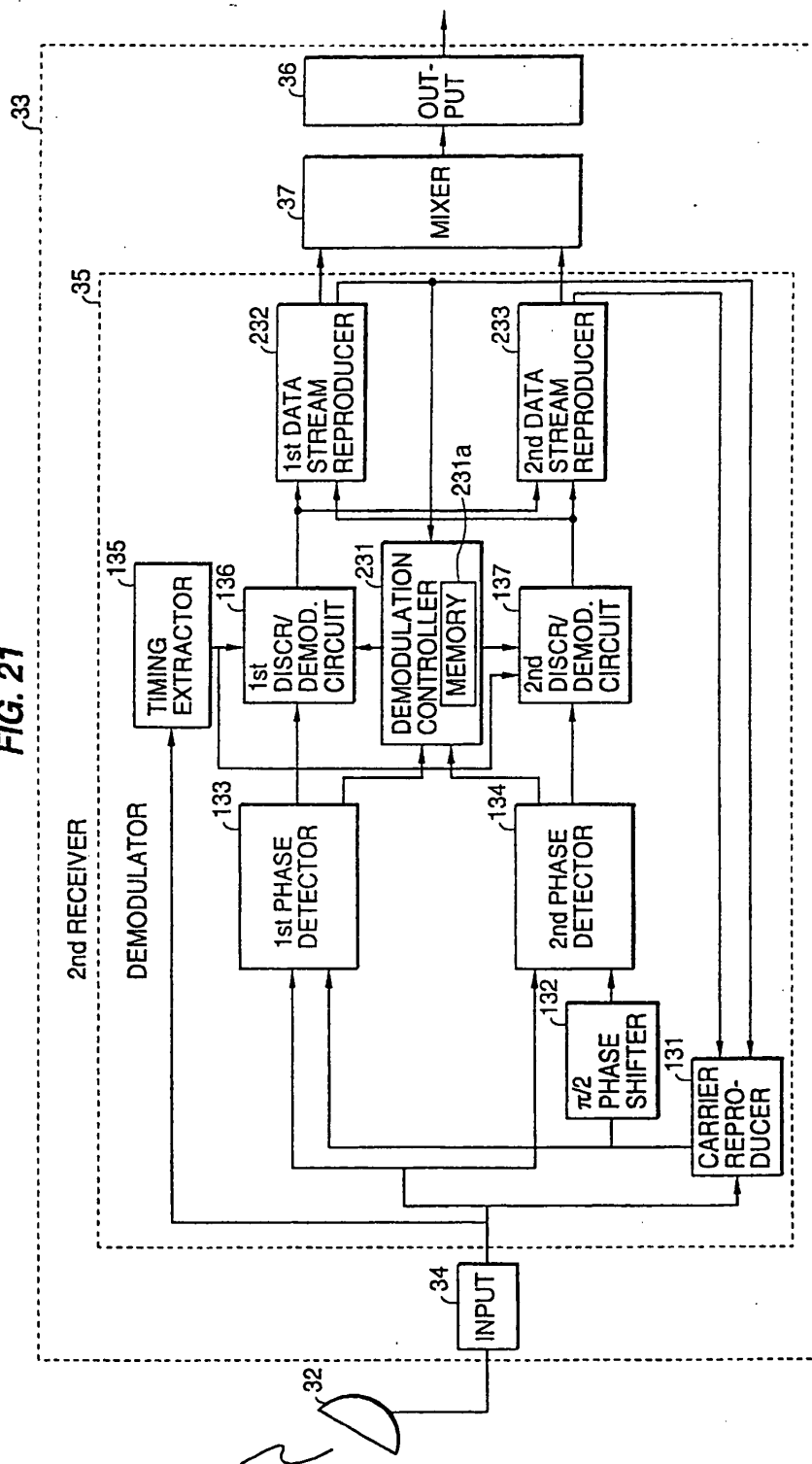
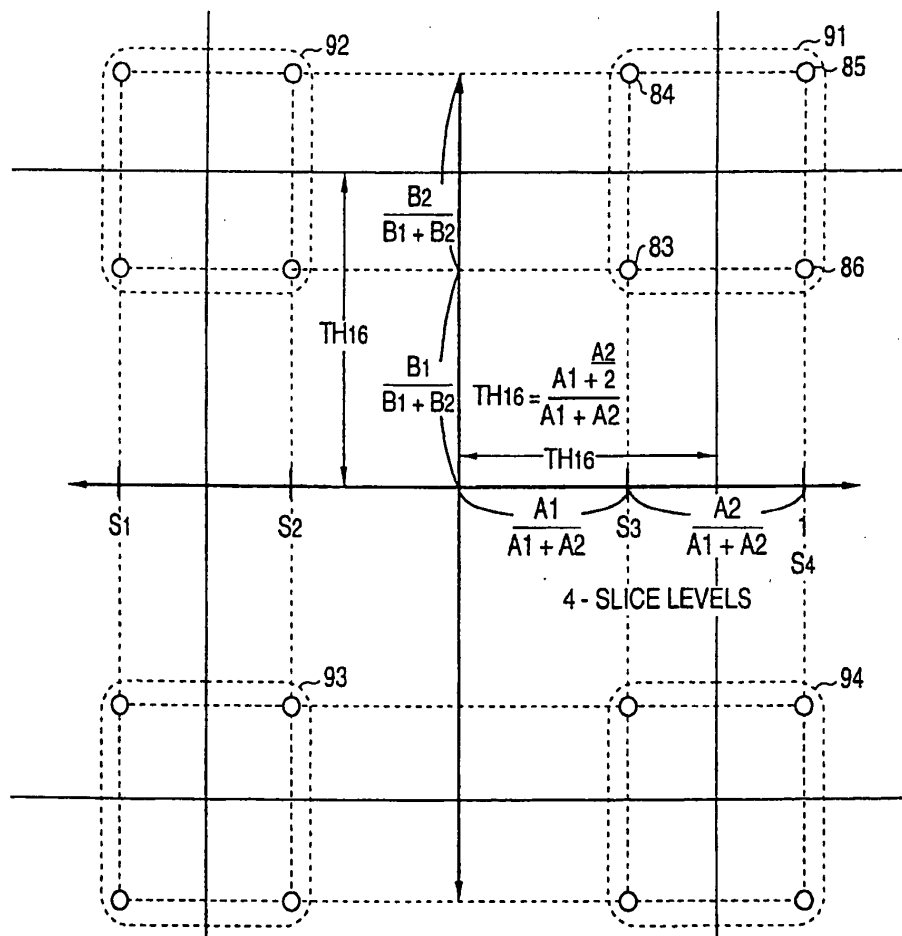


FIG. 22



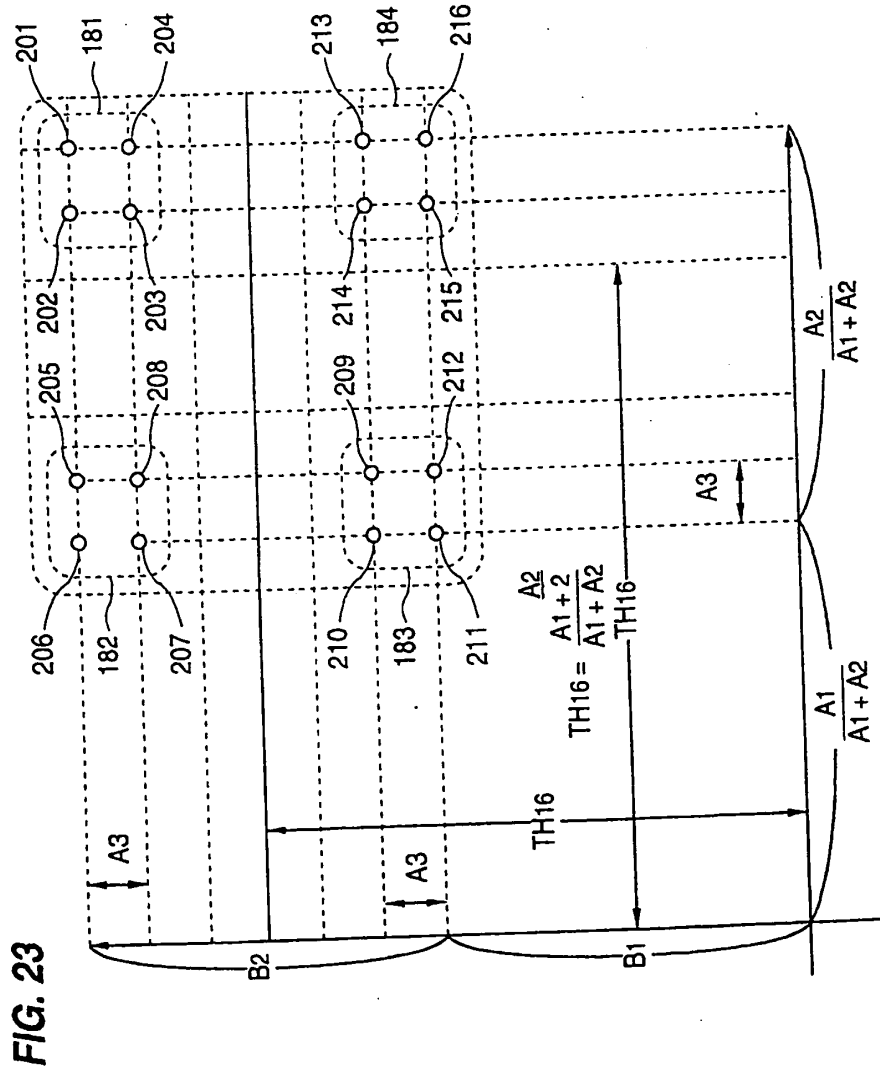
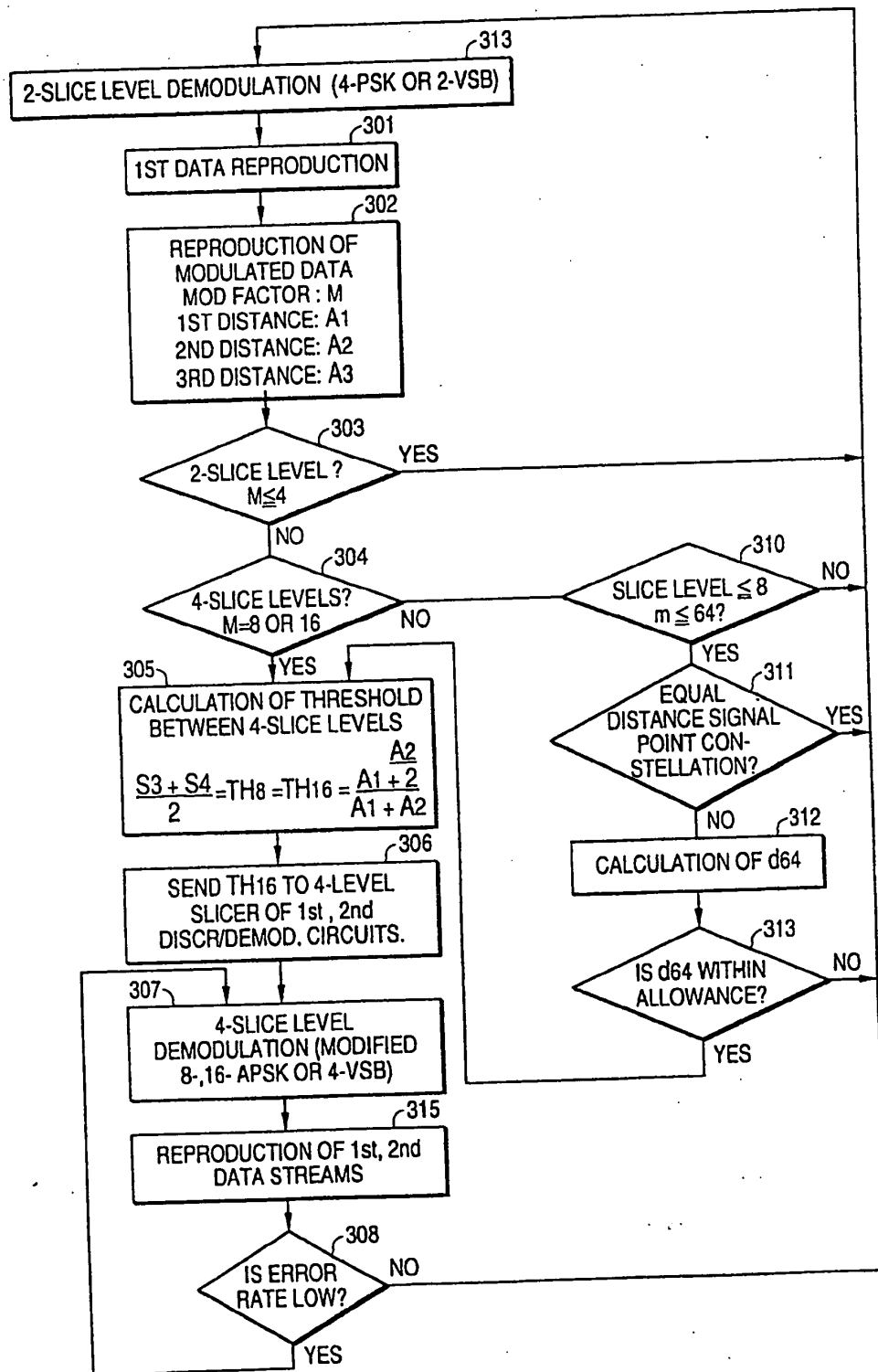




FIG. 24



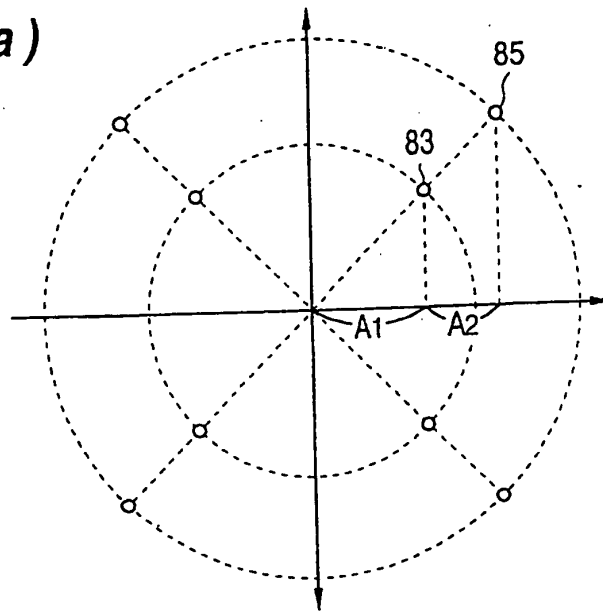
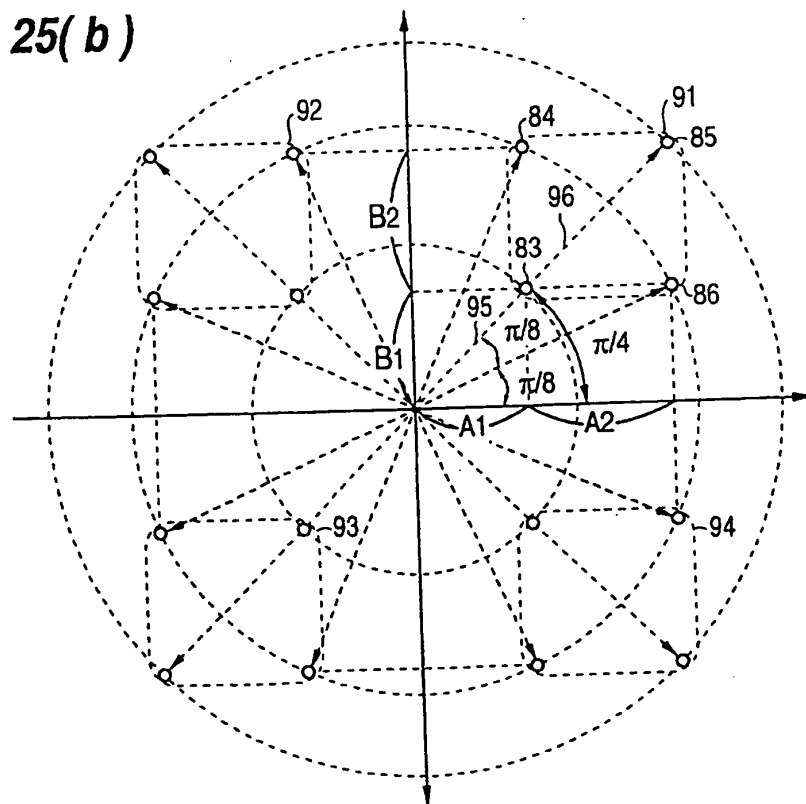
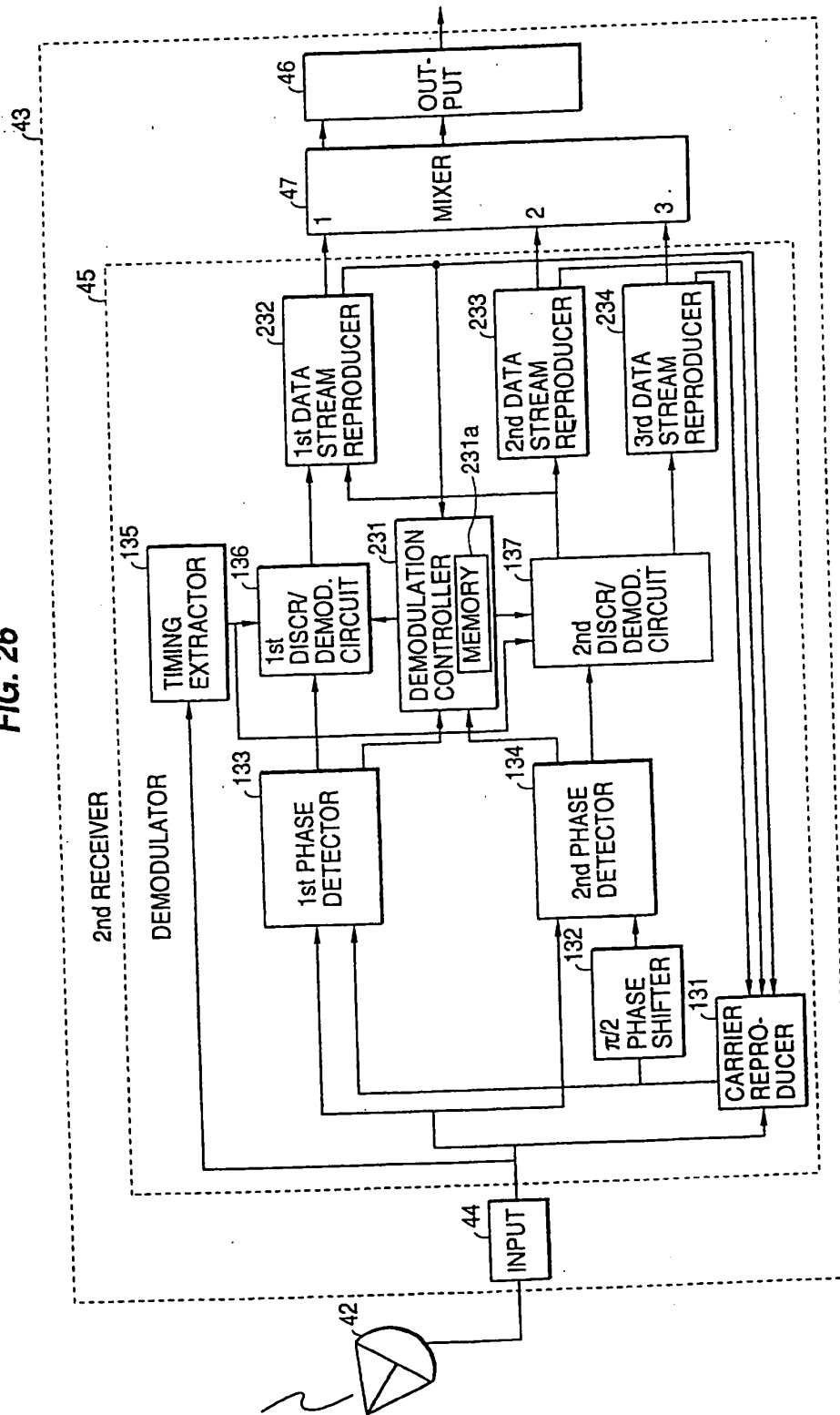
**FIG. 25(a)****FIG. 25(b)**

FIG. 26



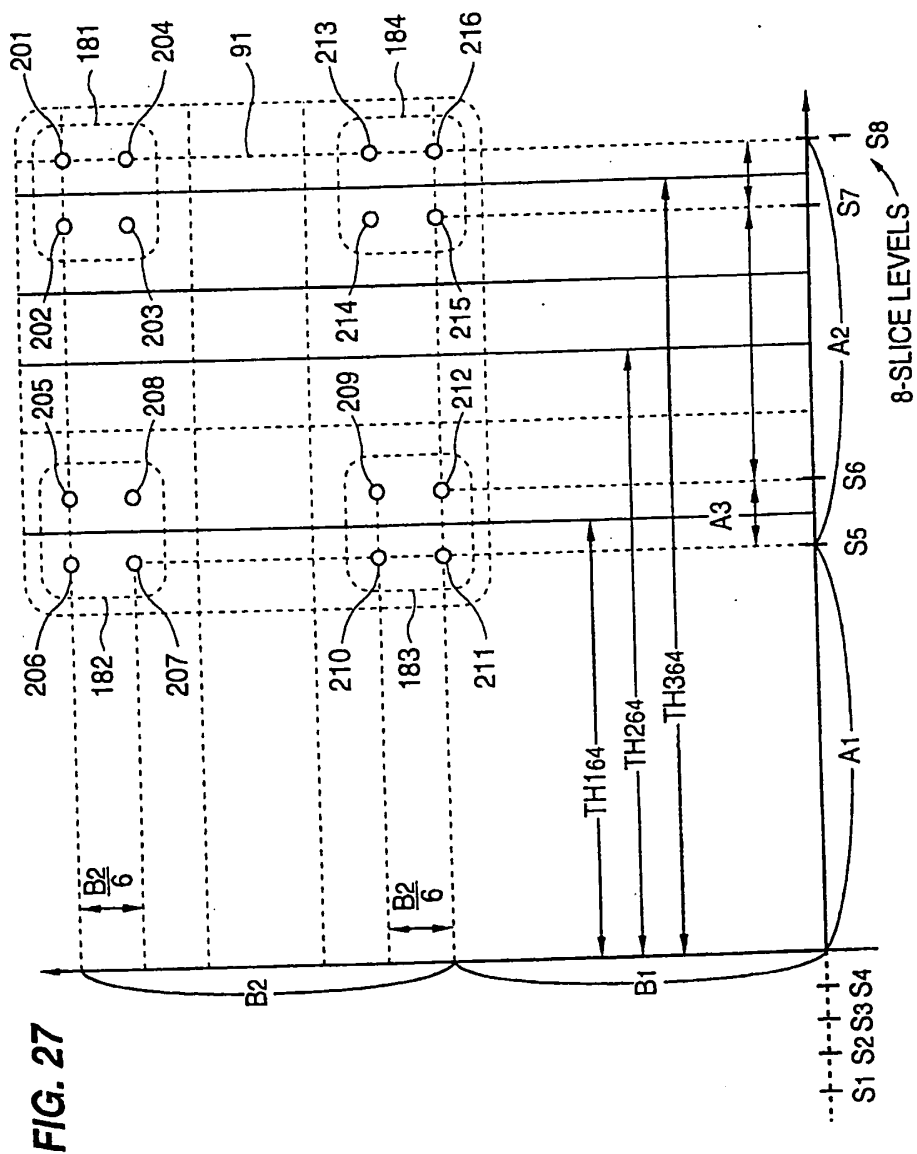
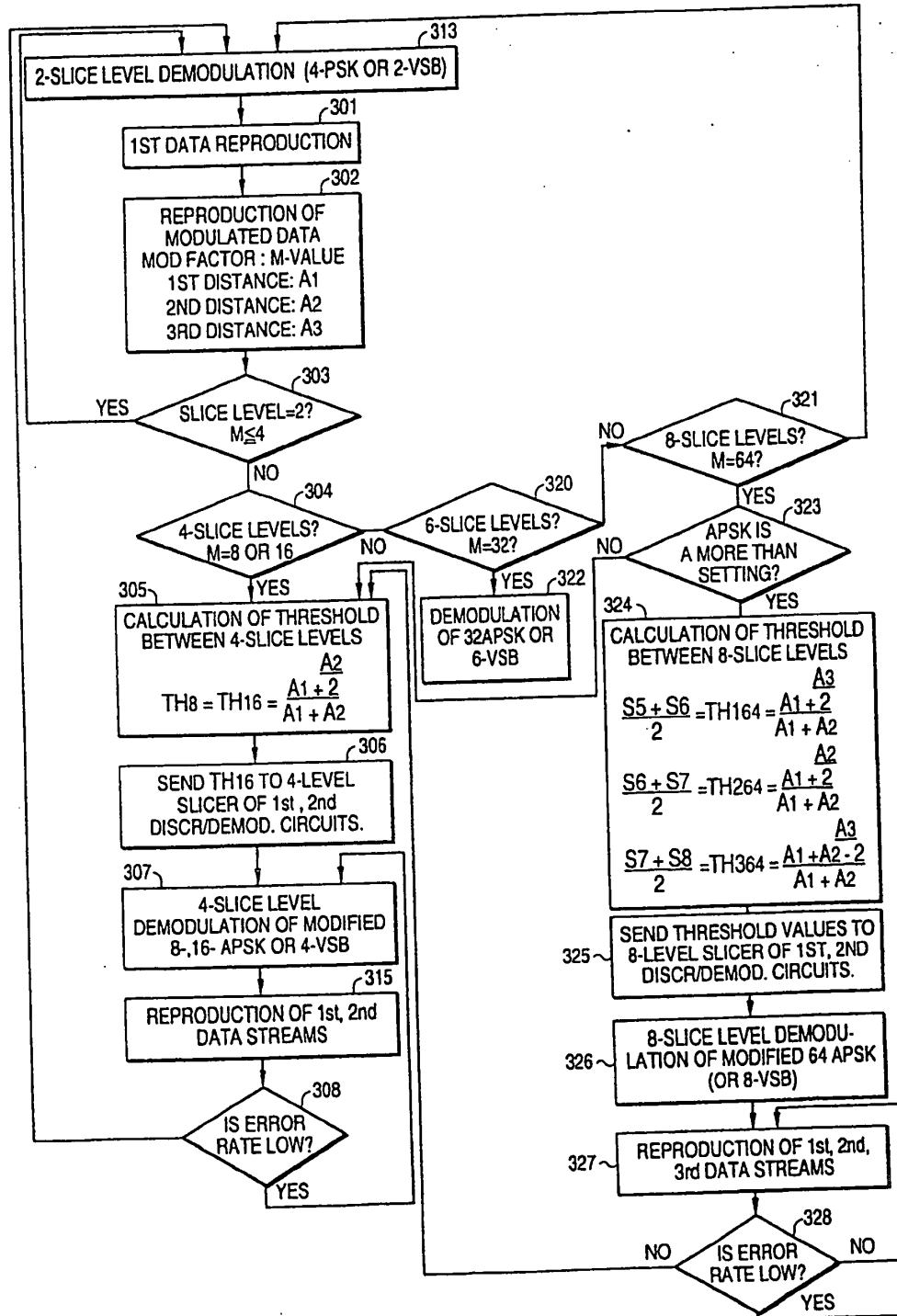


FIG. 28



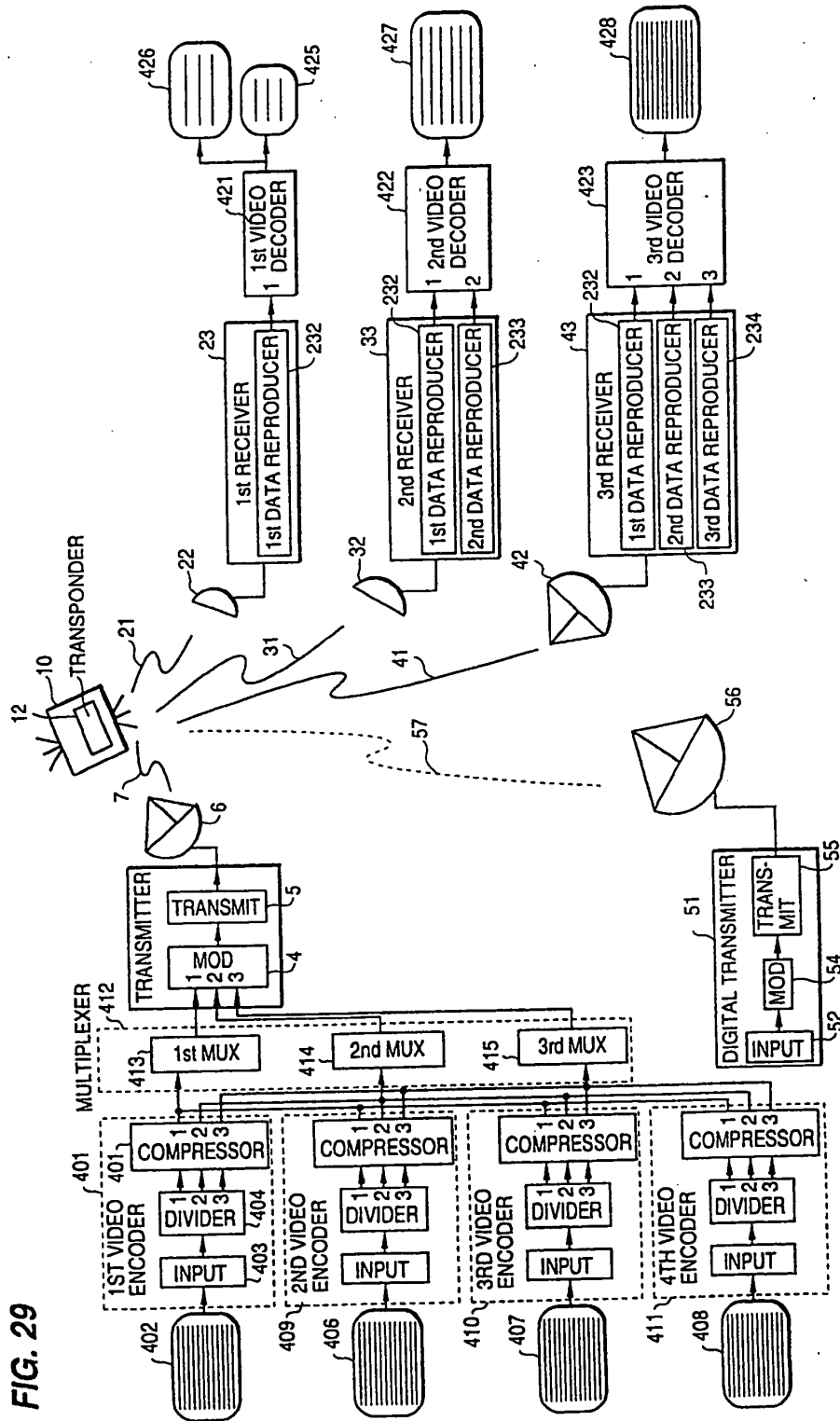
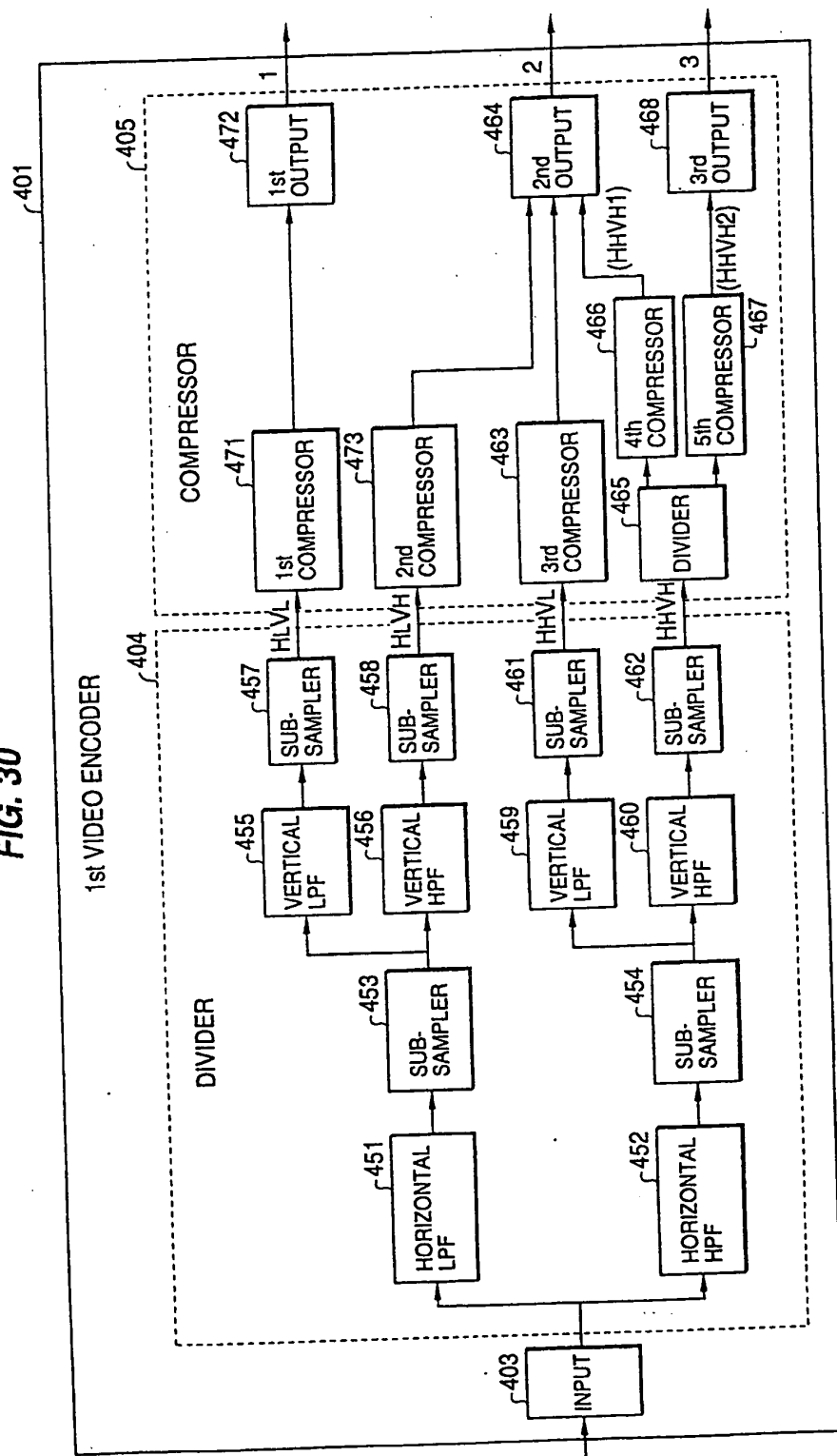


FIG. 29

FIG. 30



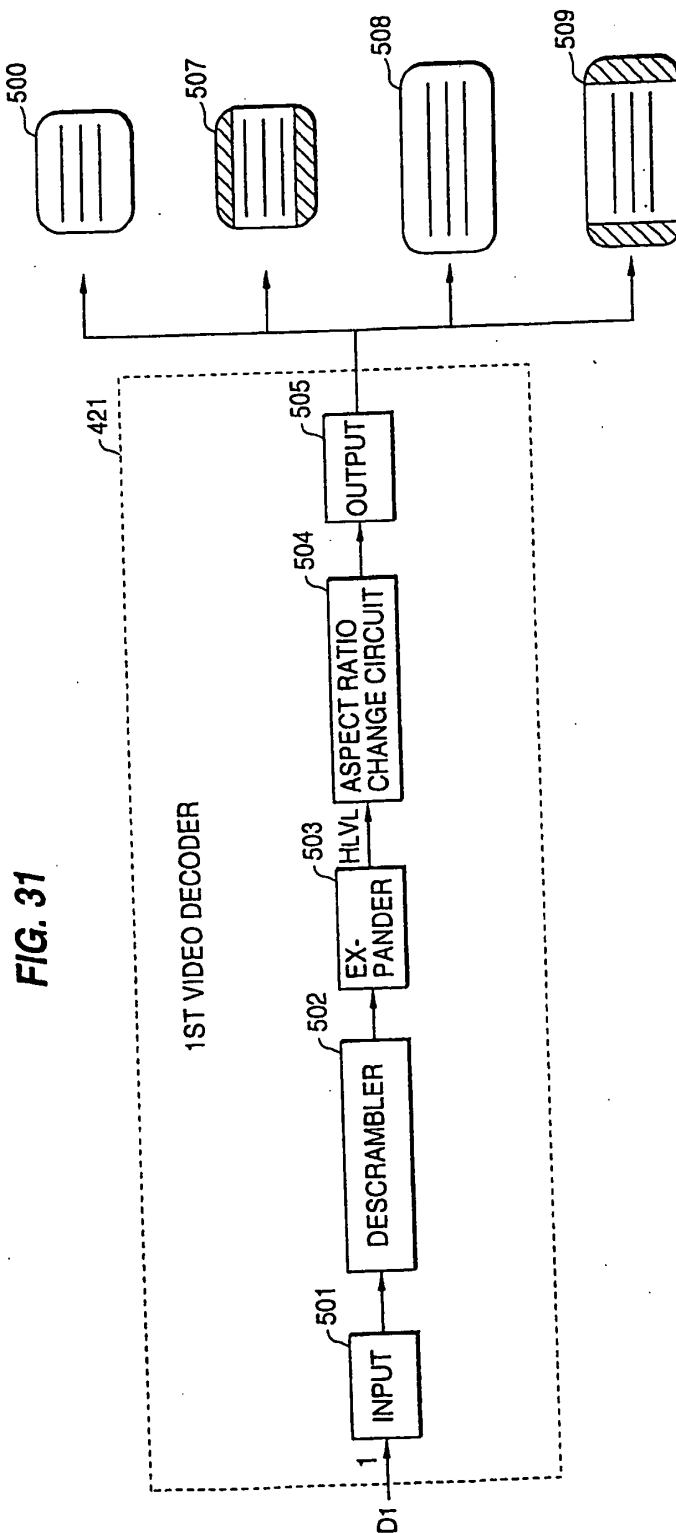




FIG. 32

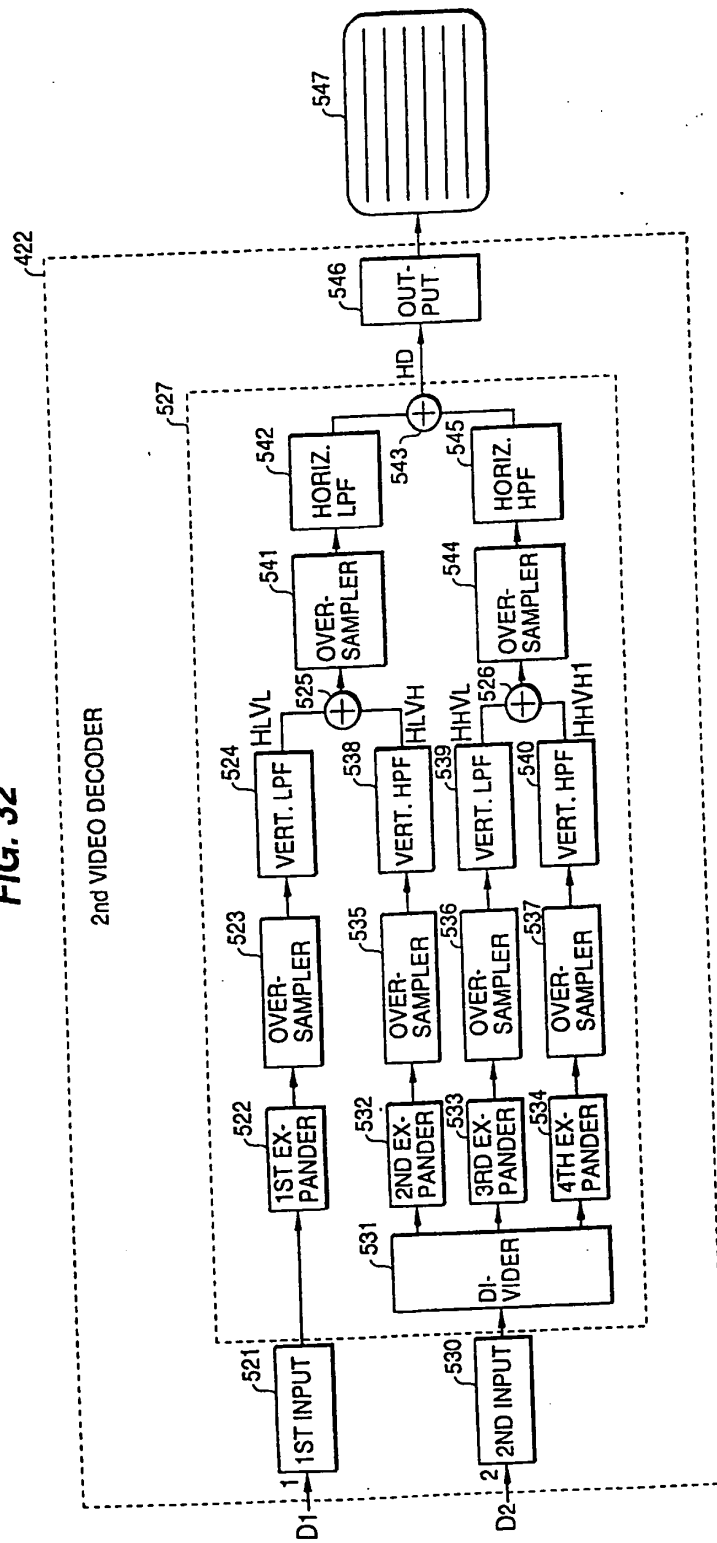


FIG. 33

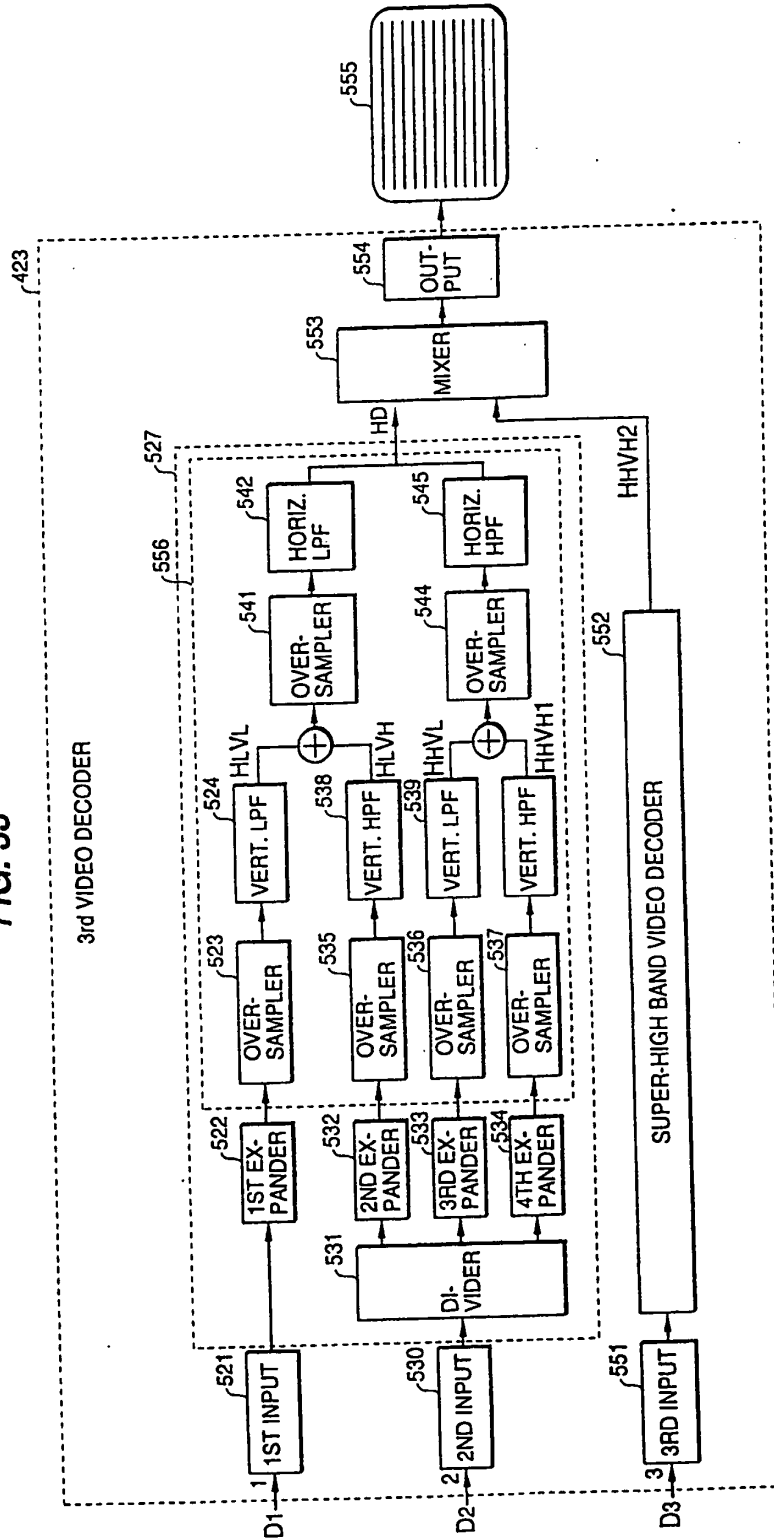


FIG. 34

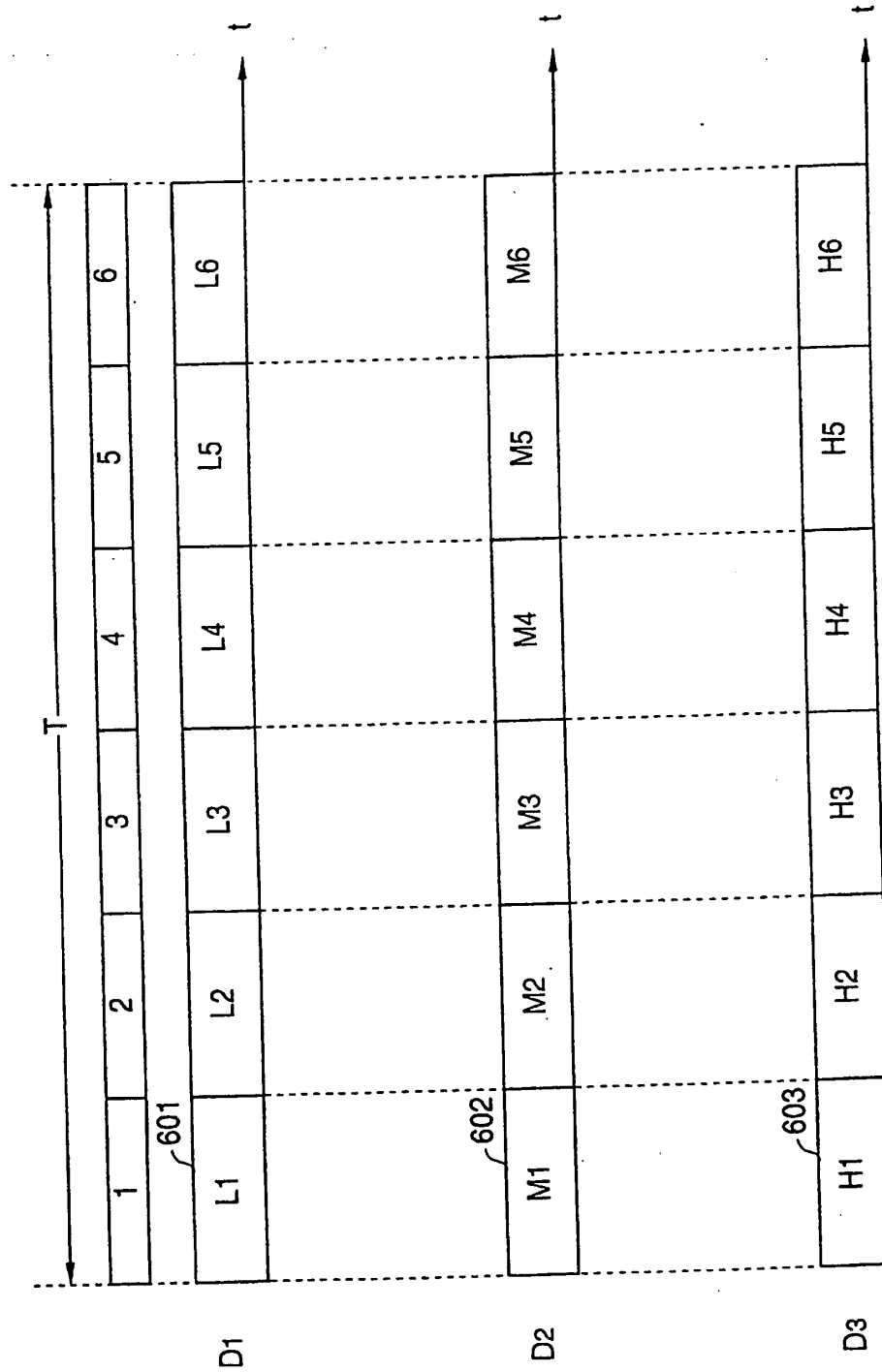


FIG. 35

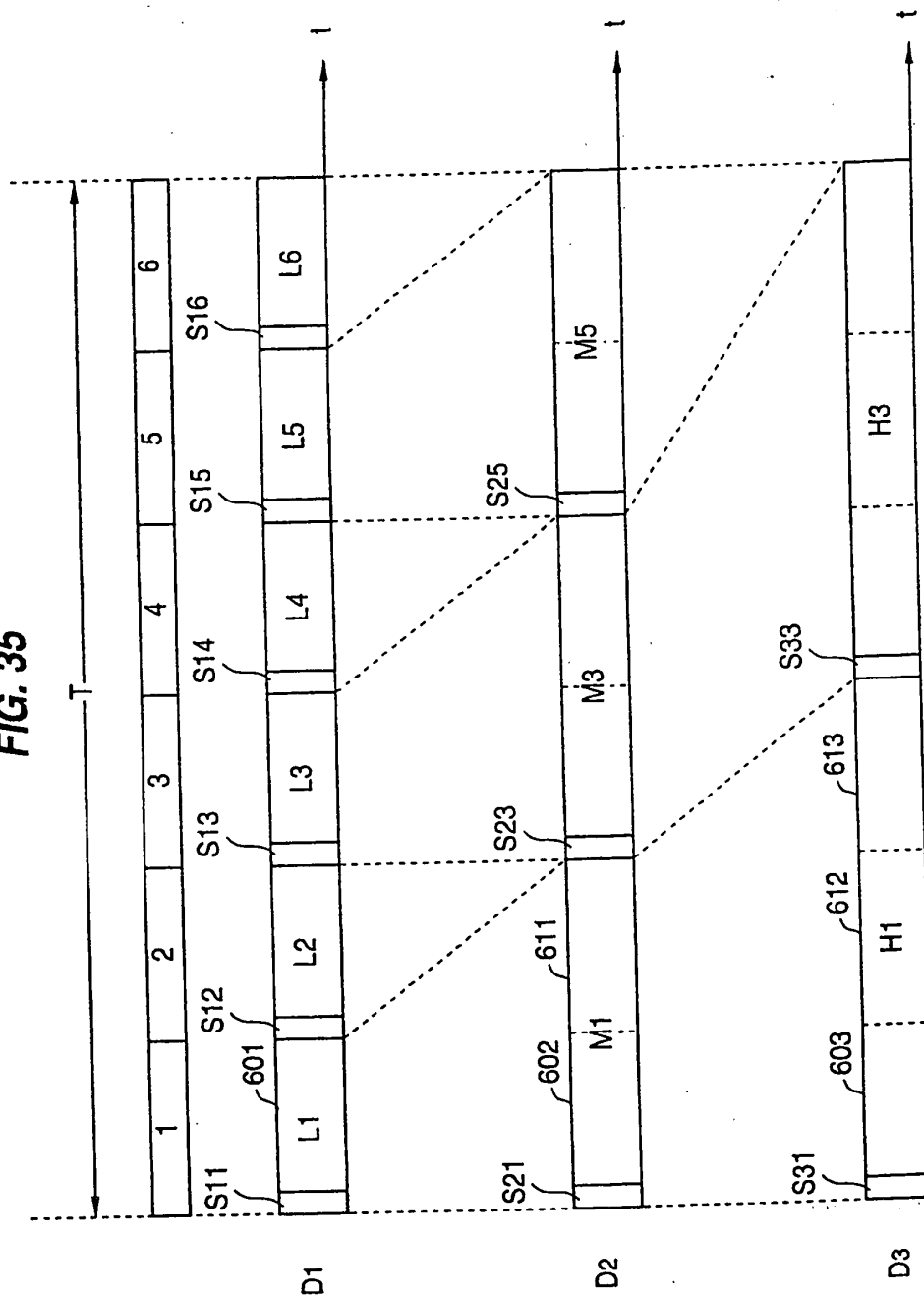


FIG. 36

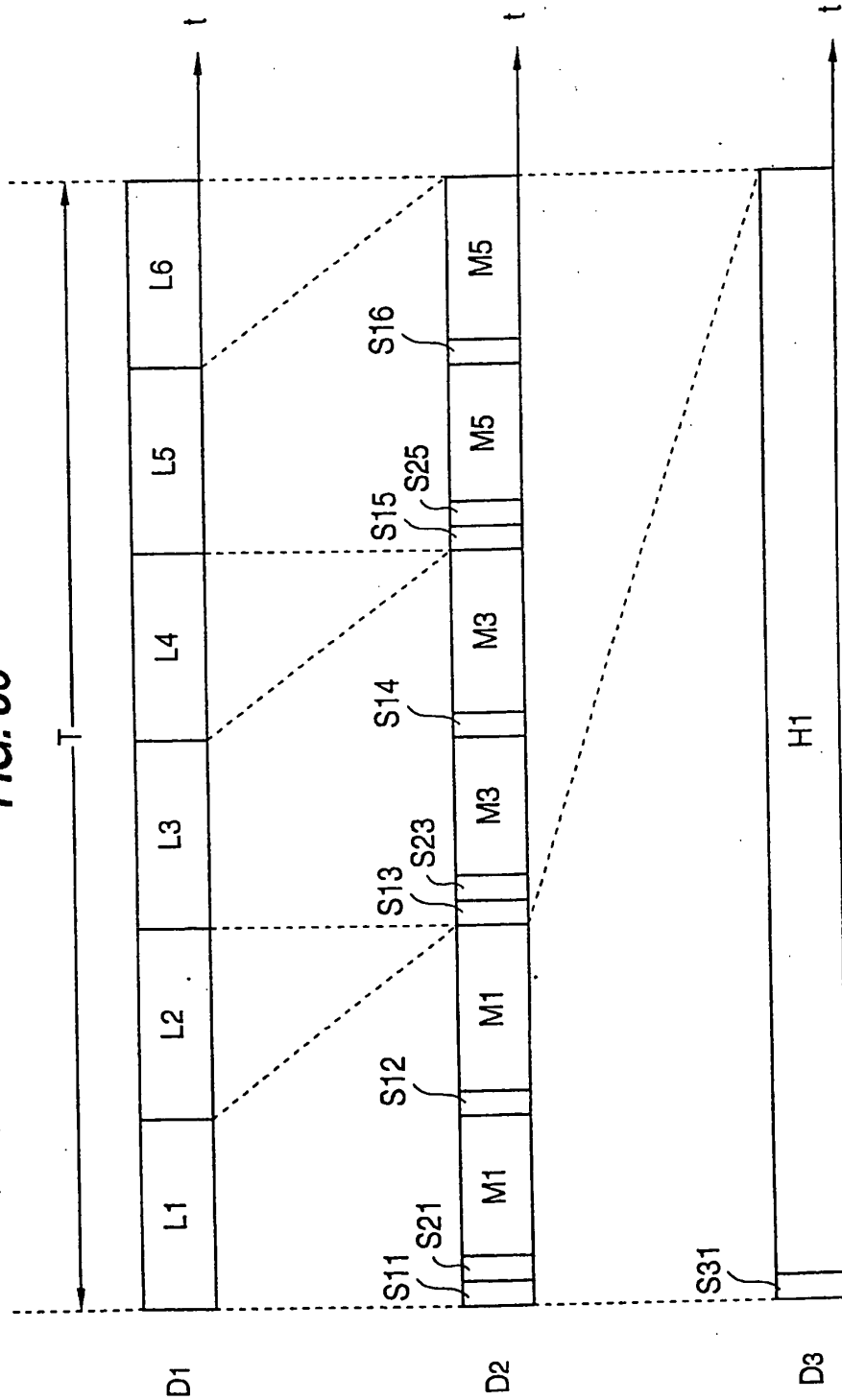


FIG. 37

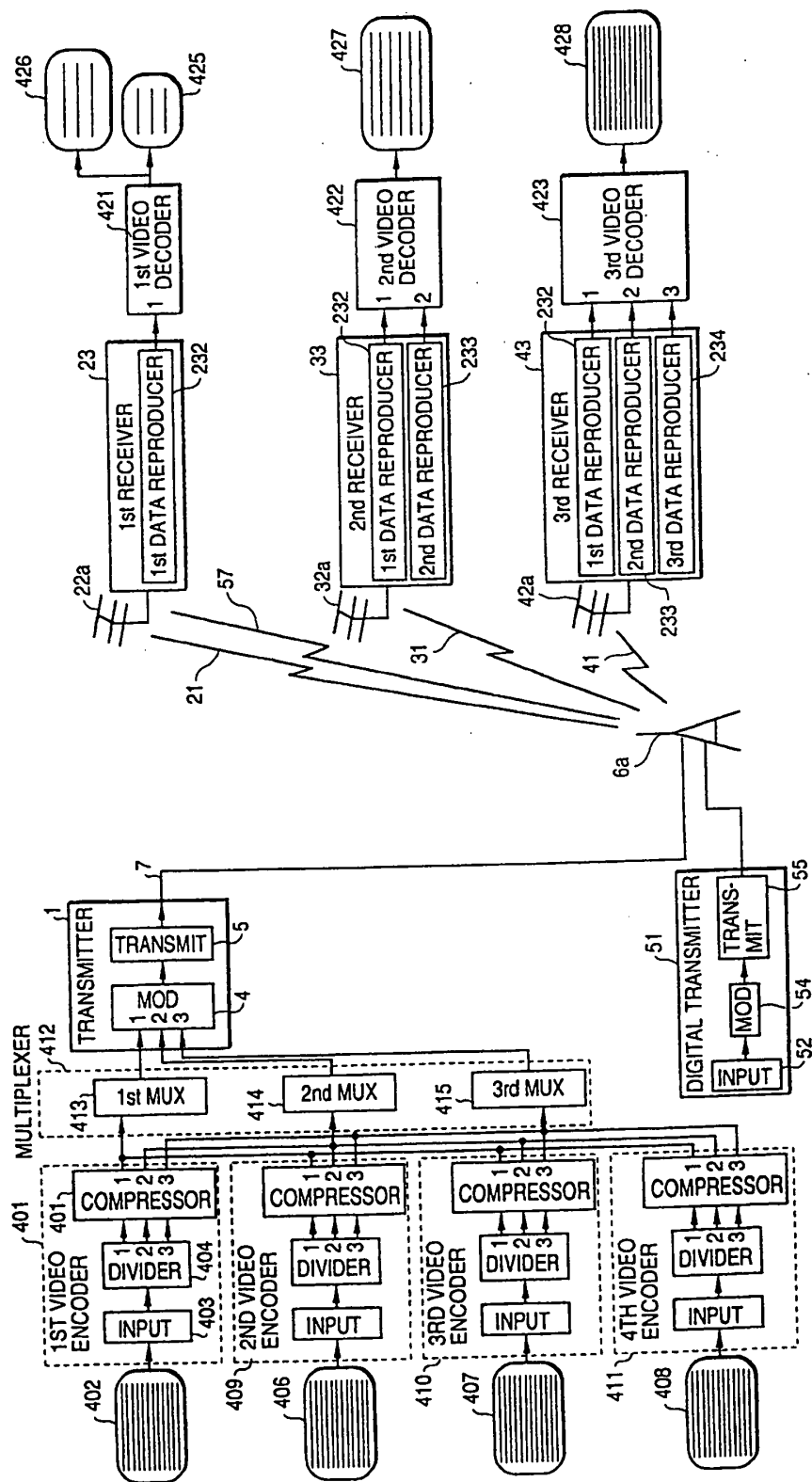


FIG. 38

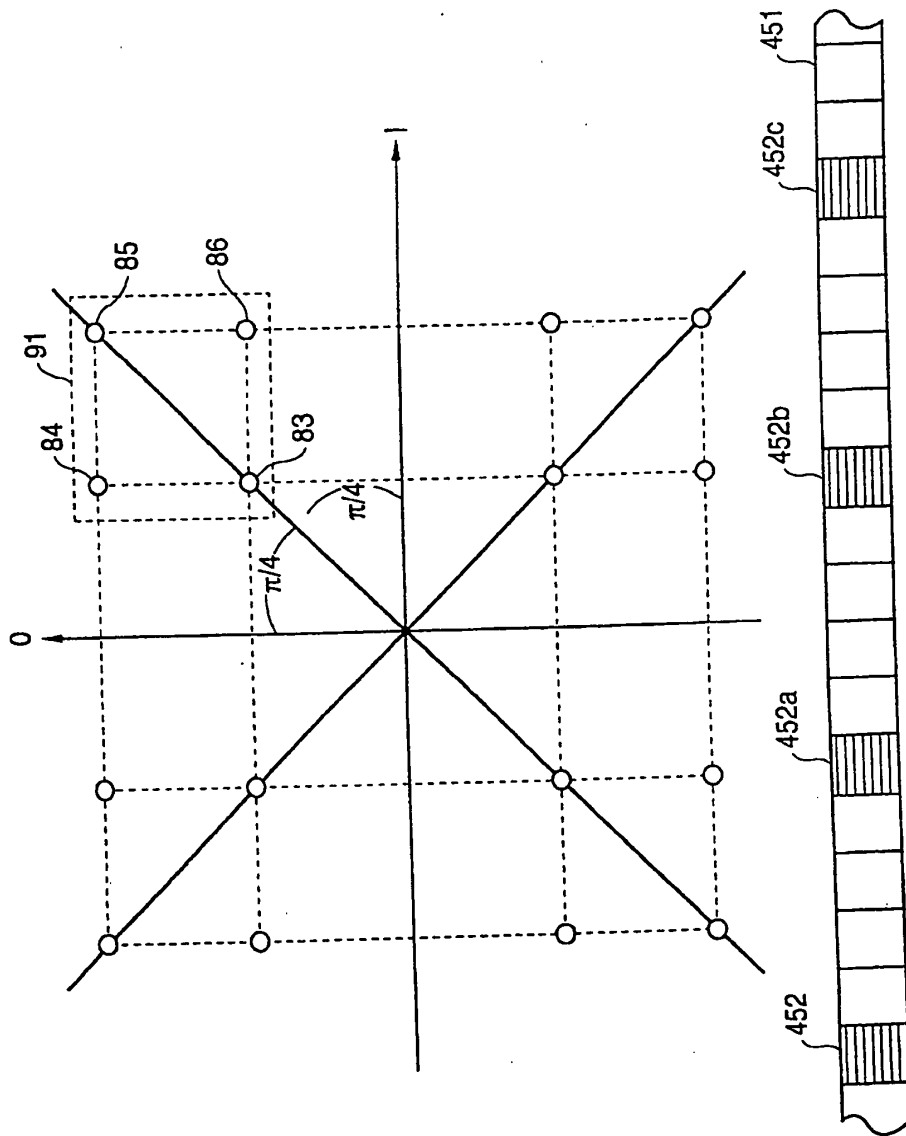


FIG. 39

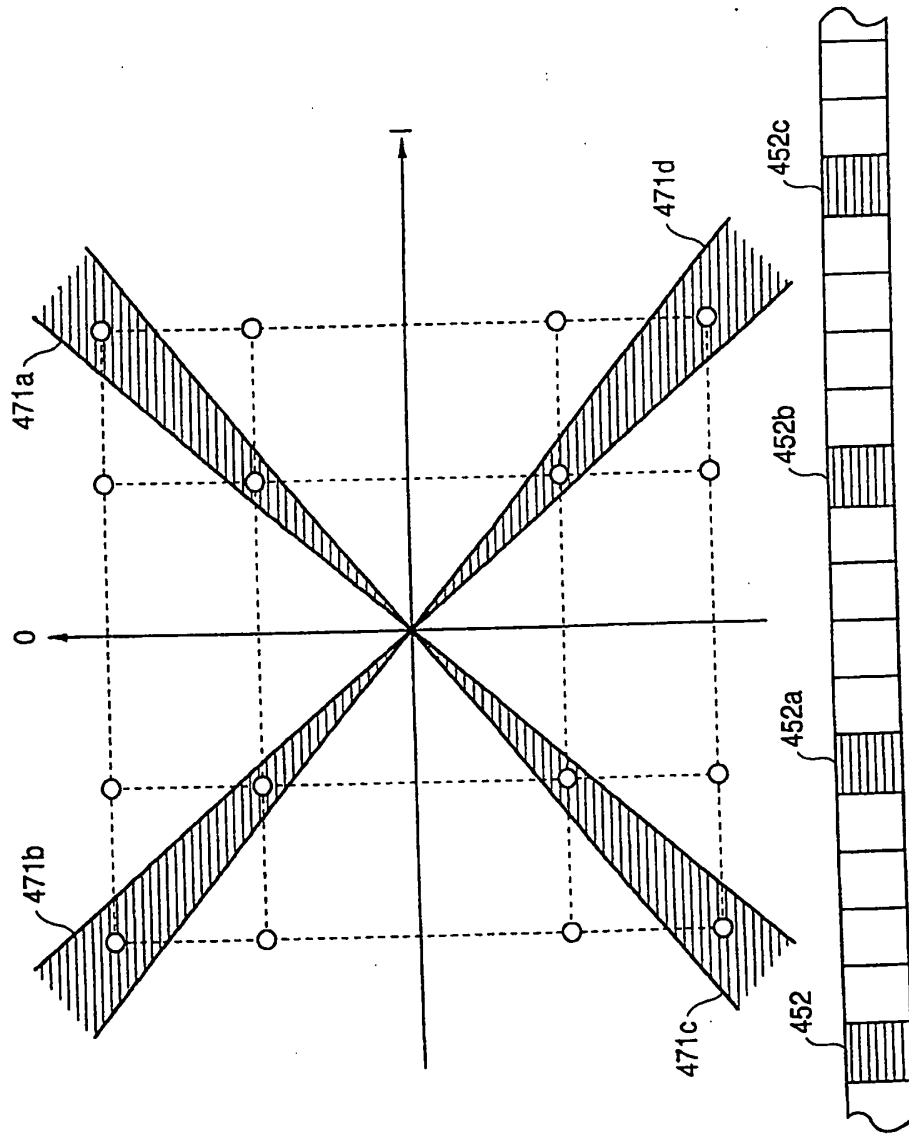
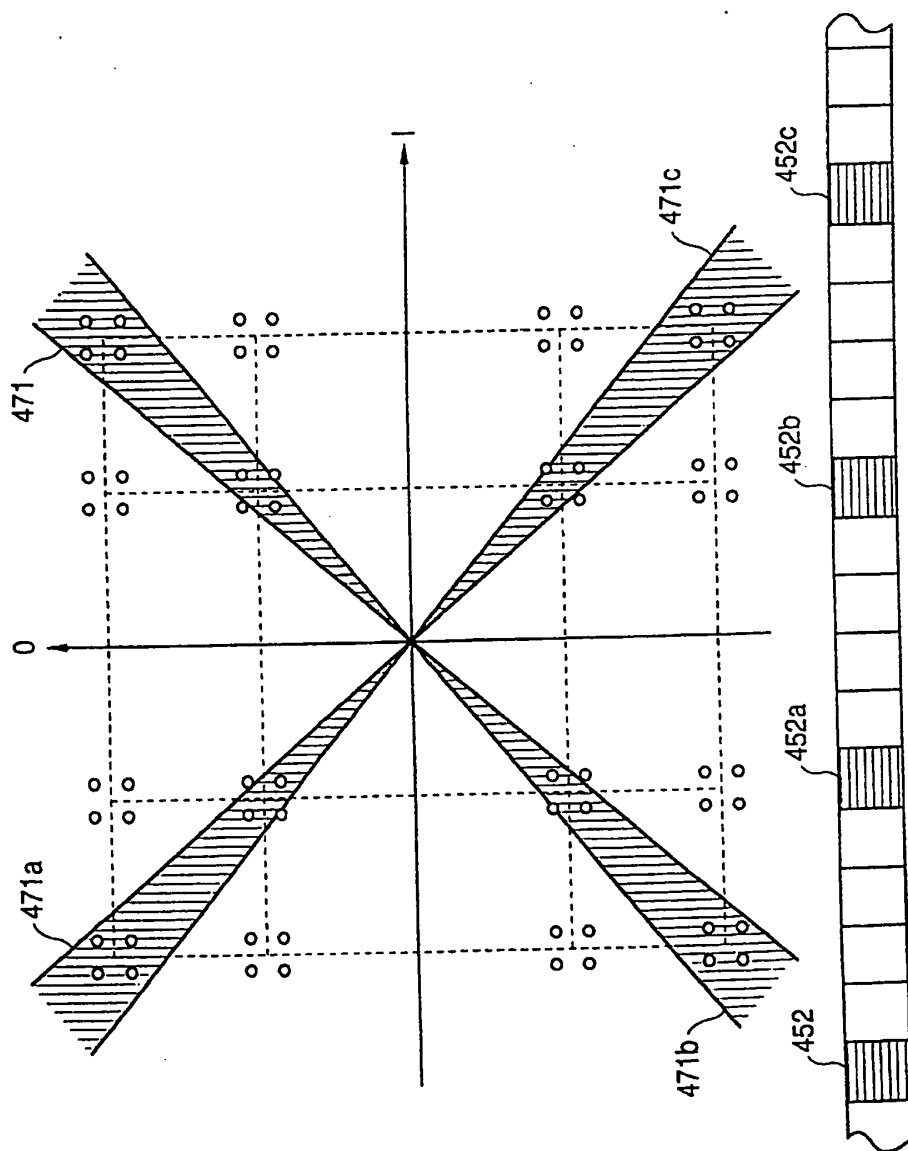




FIG. 40



**FIG. 41**

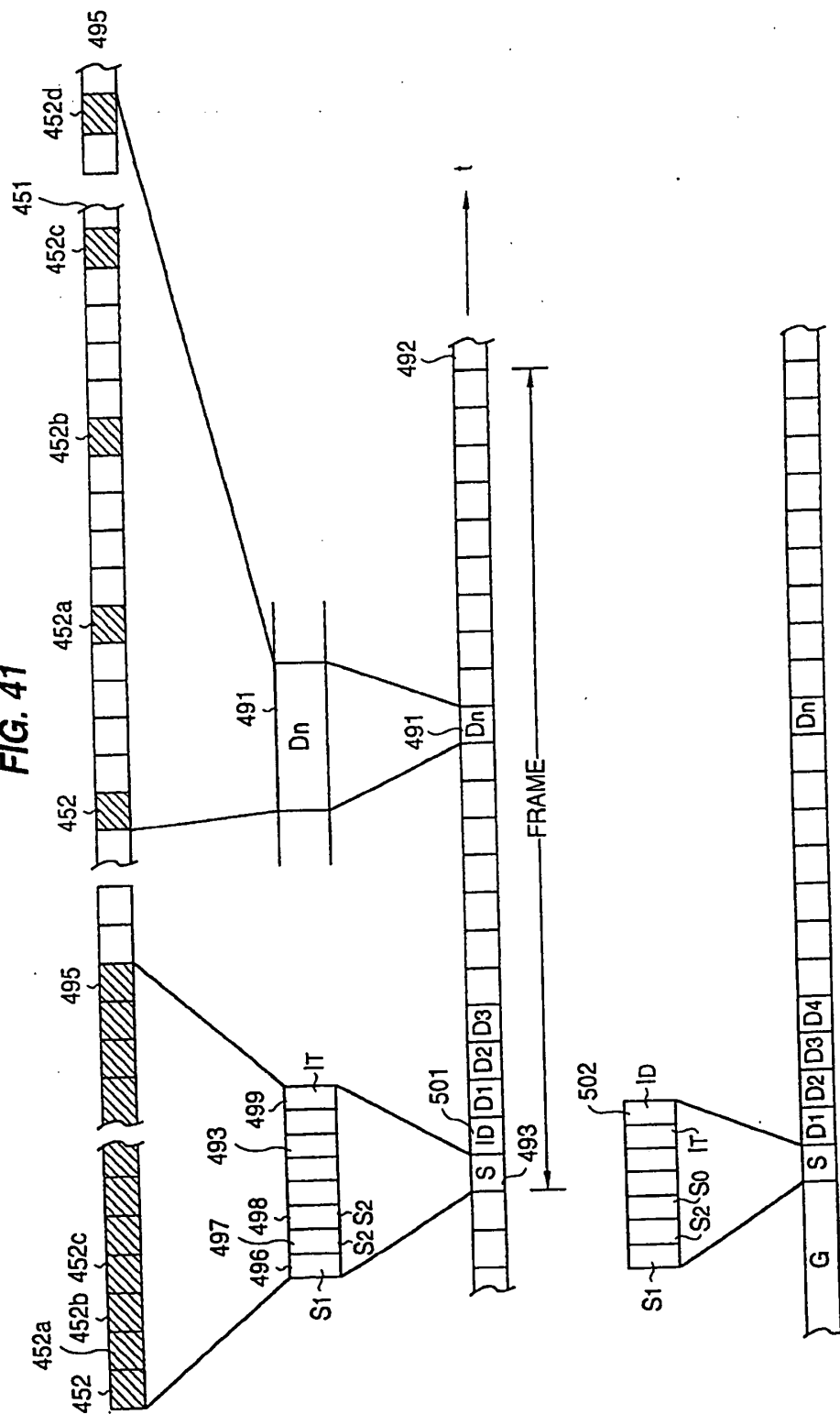


FIG. 42

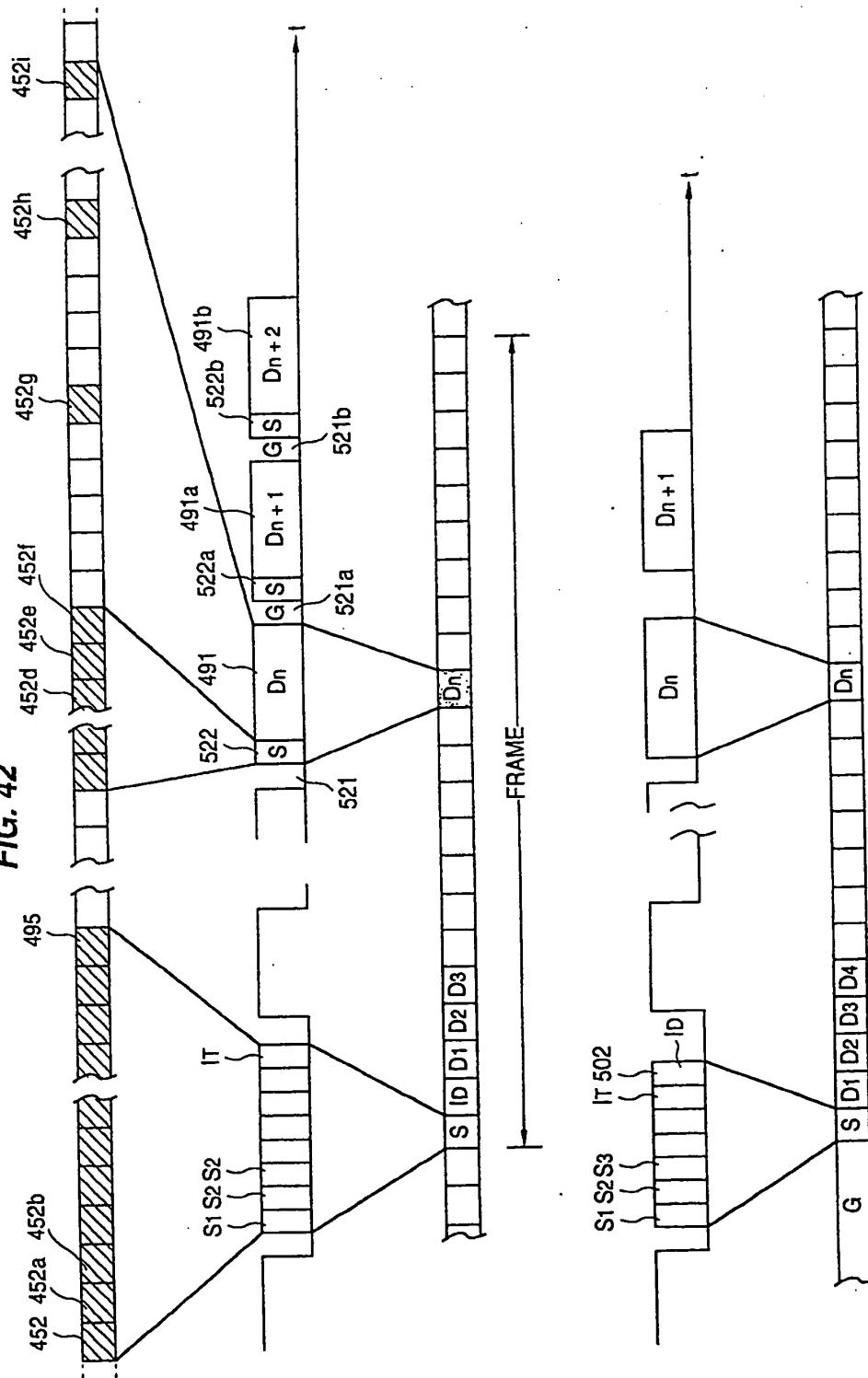


FIG. 43

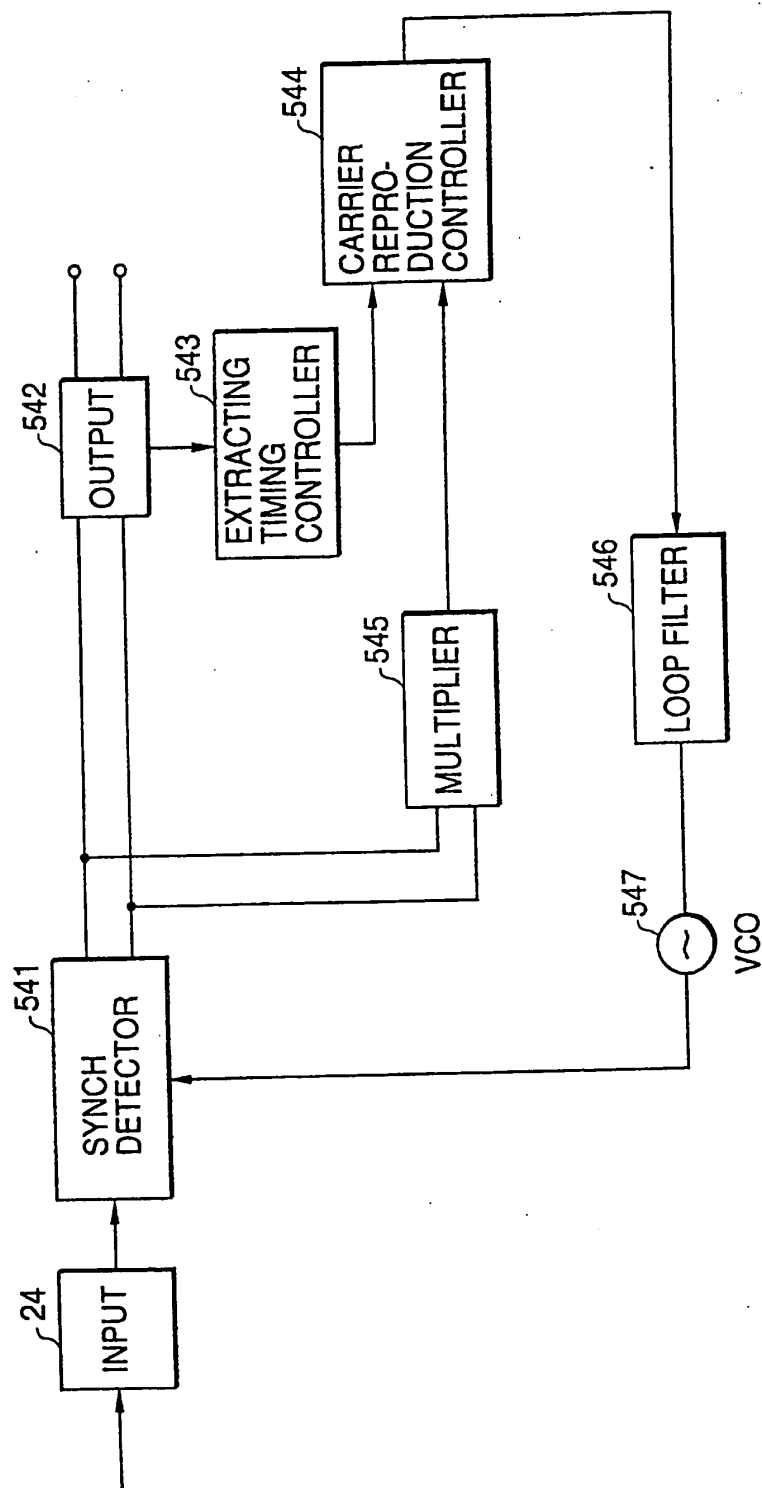


FIG. 44

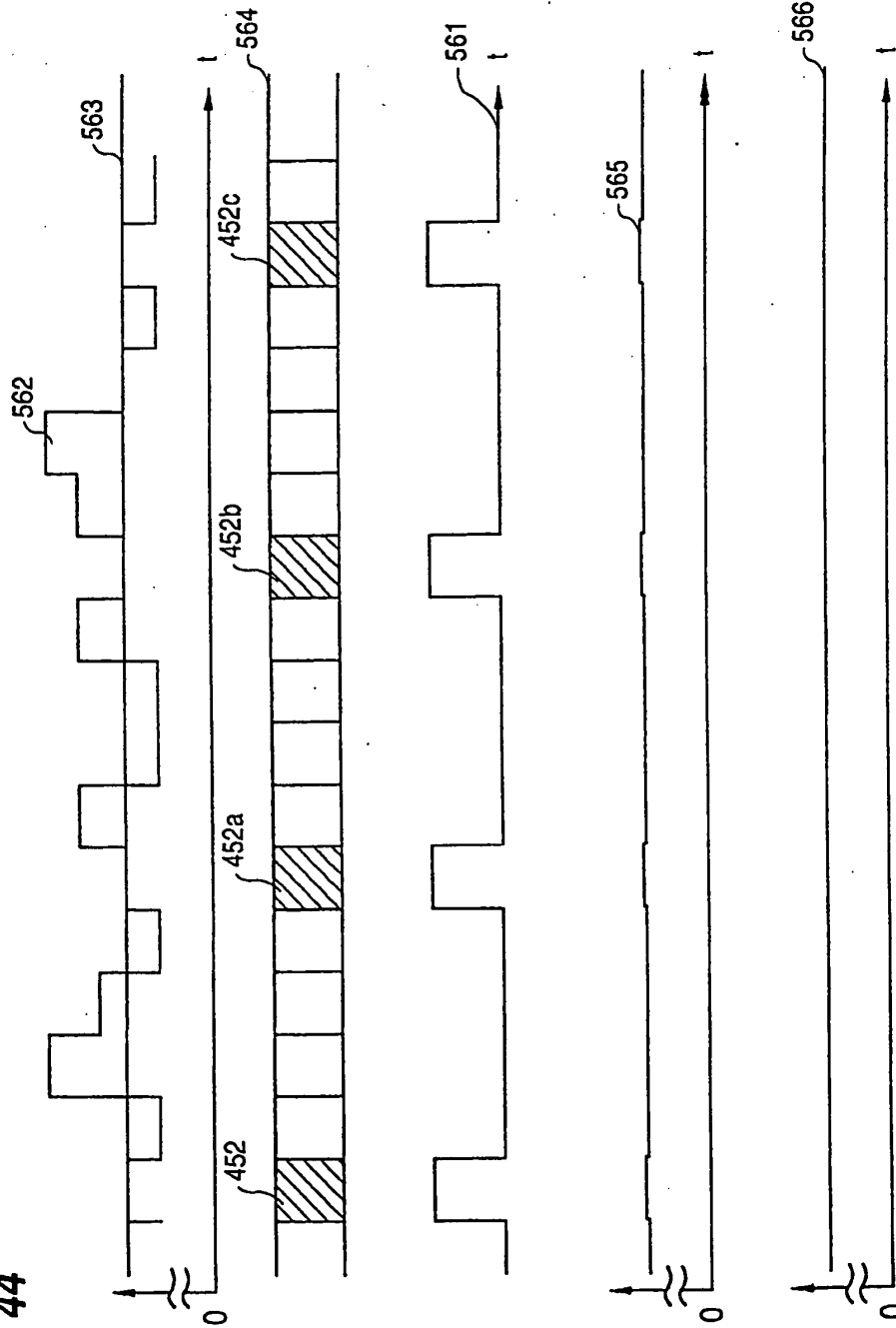


FIG. 45

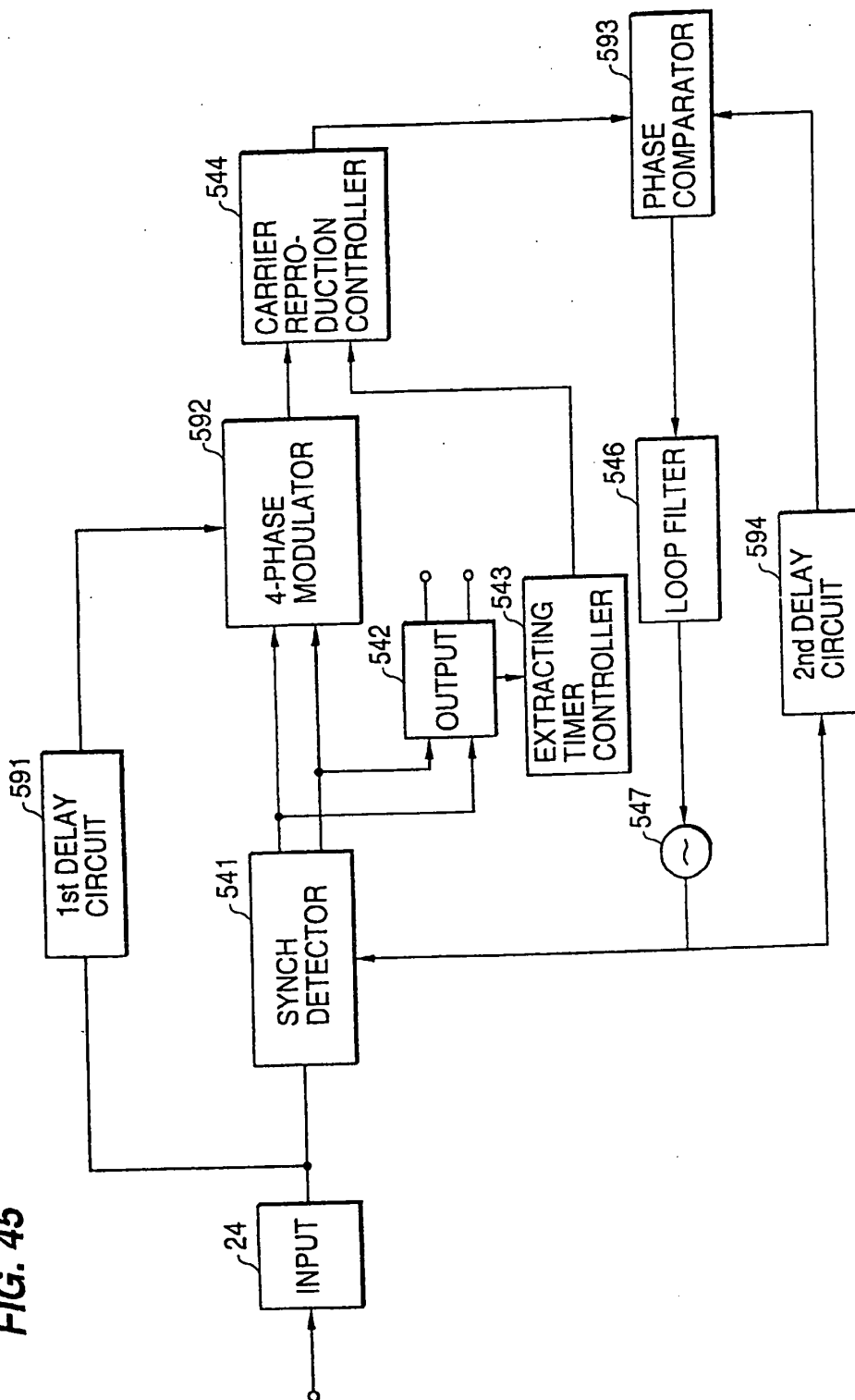


FIG. 46

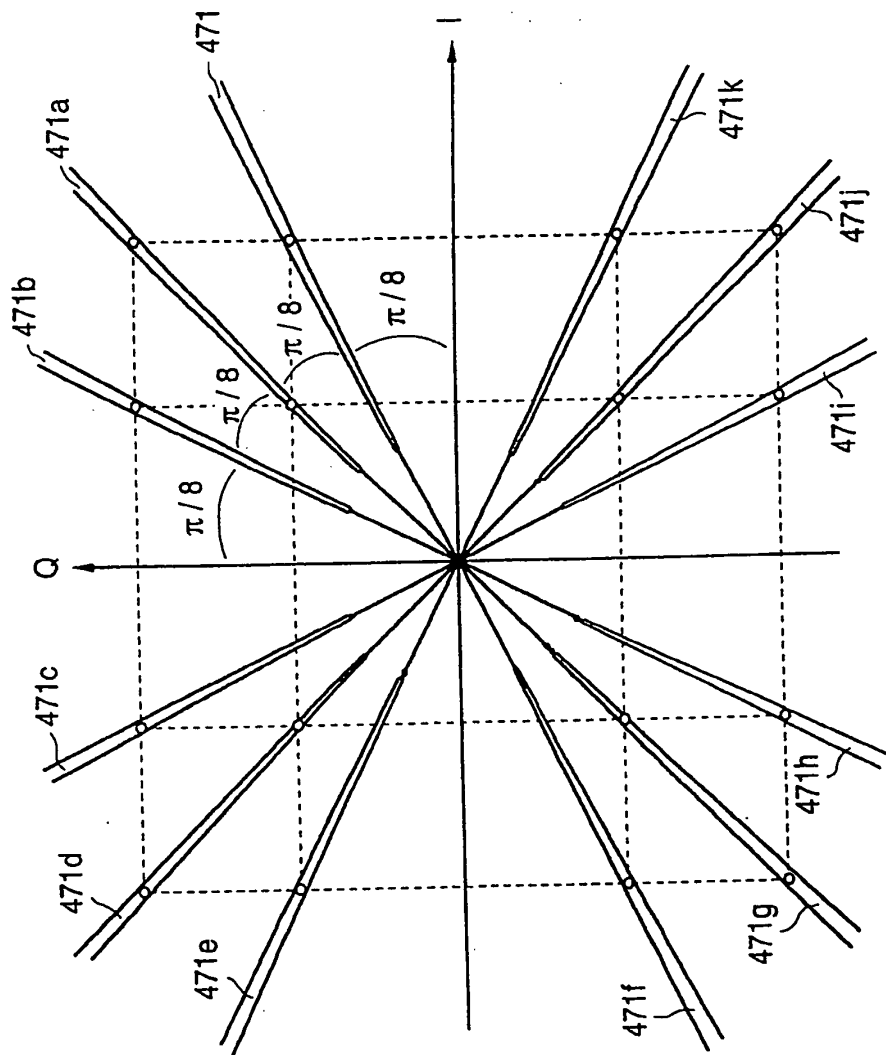


FIG. 47

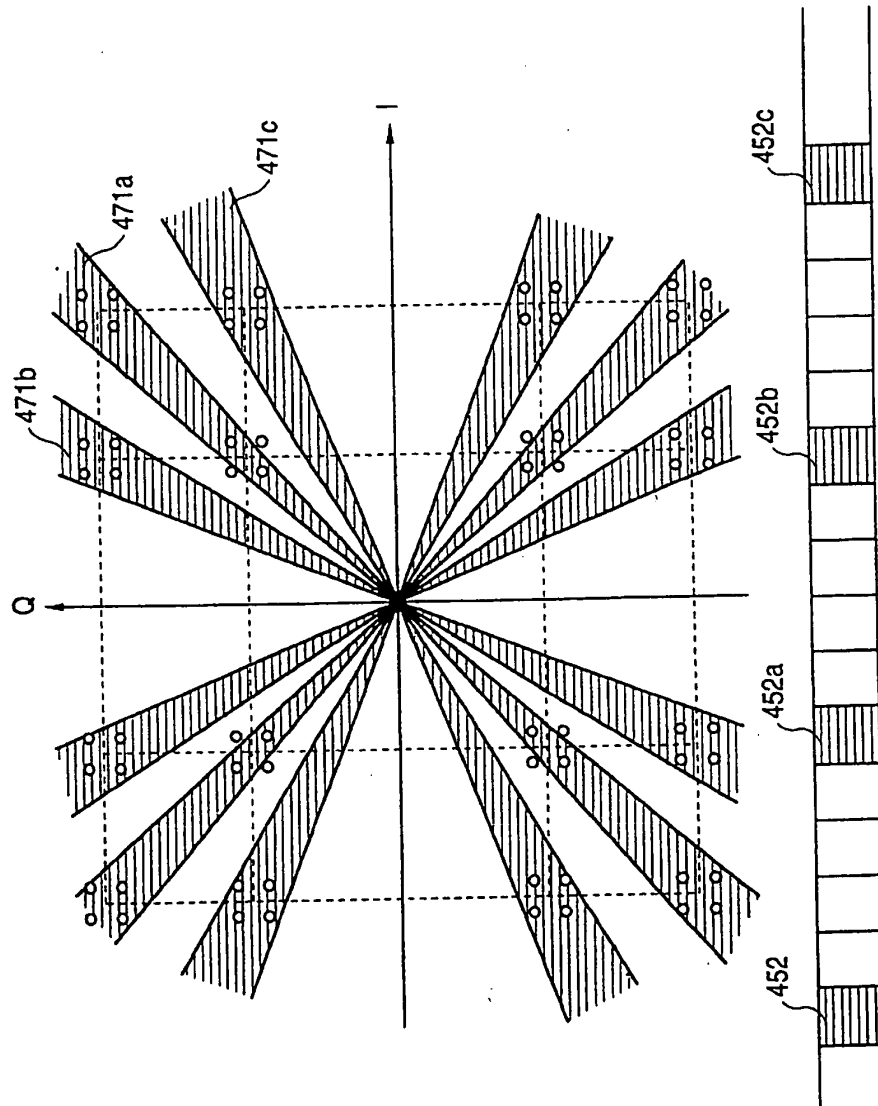




FIG. 48

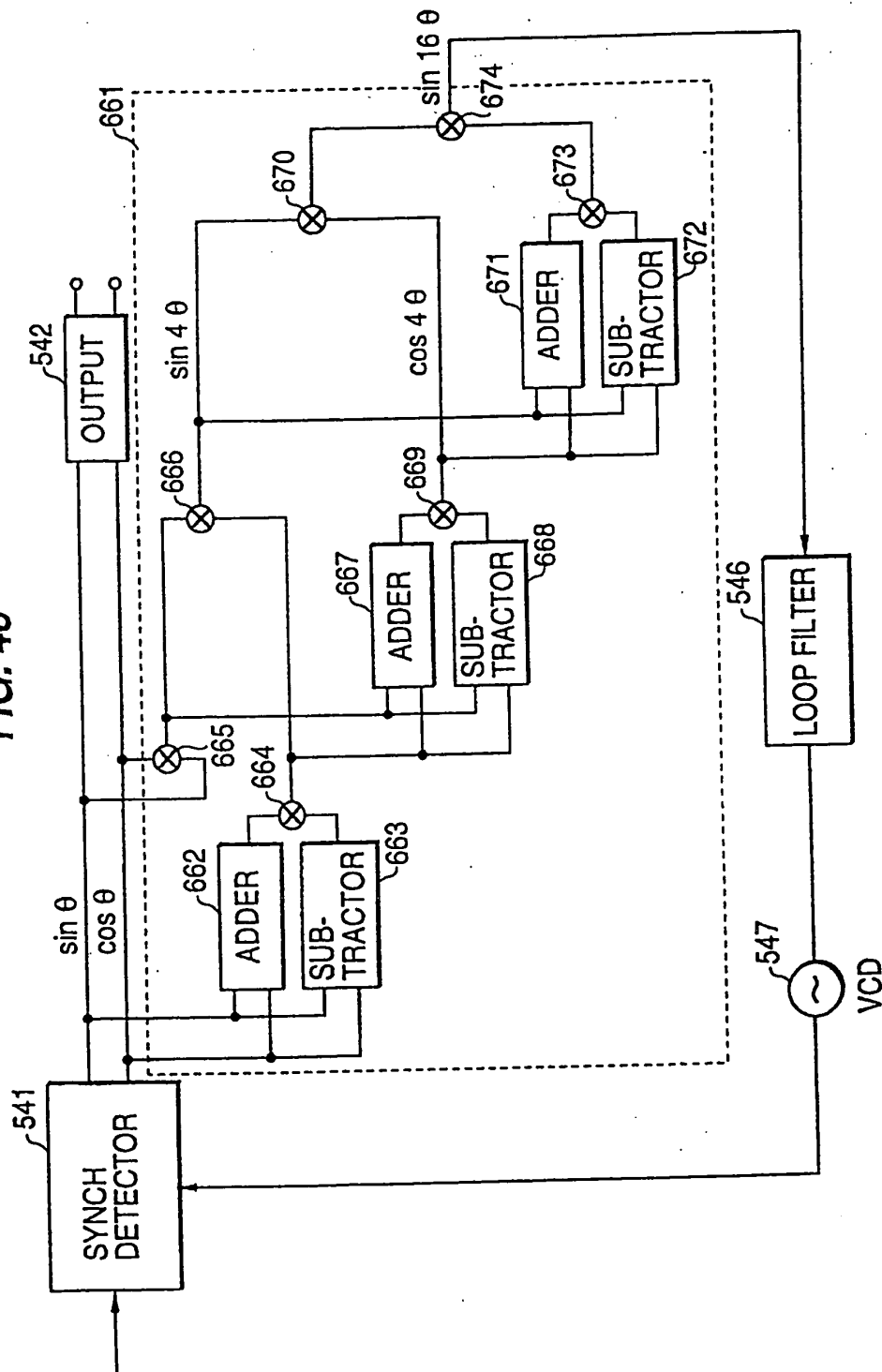


FIG. 49

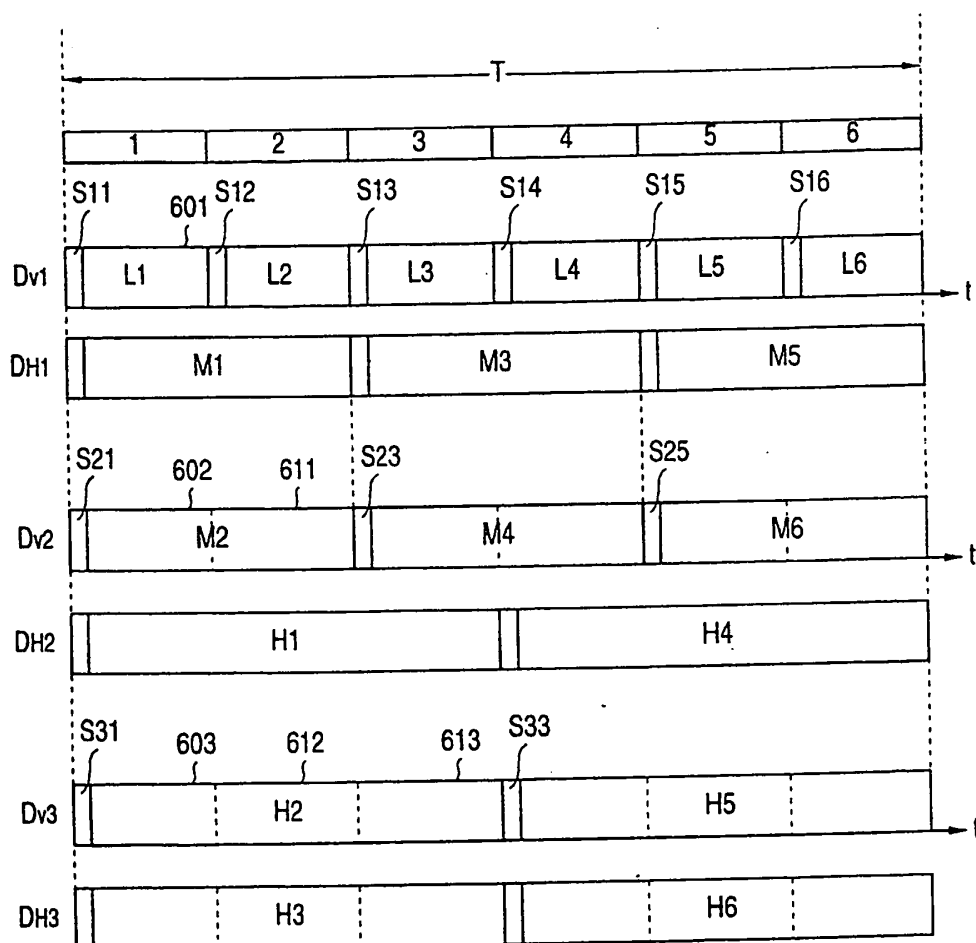


FIG. 50

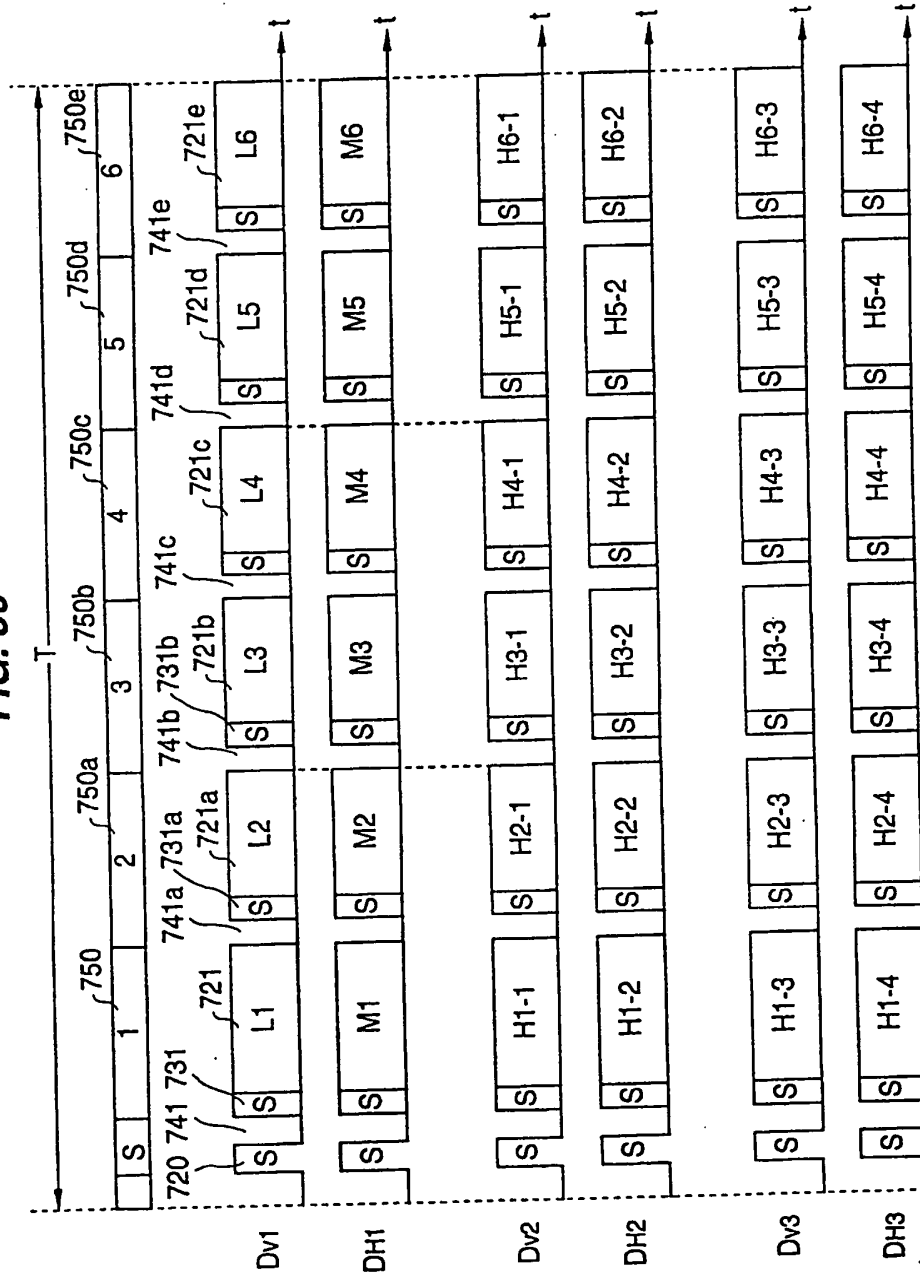


FIG. 51

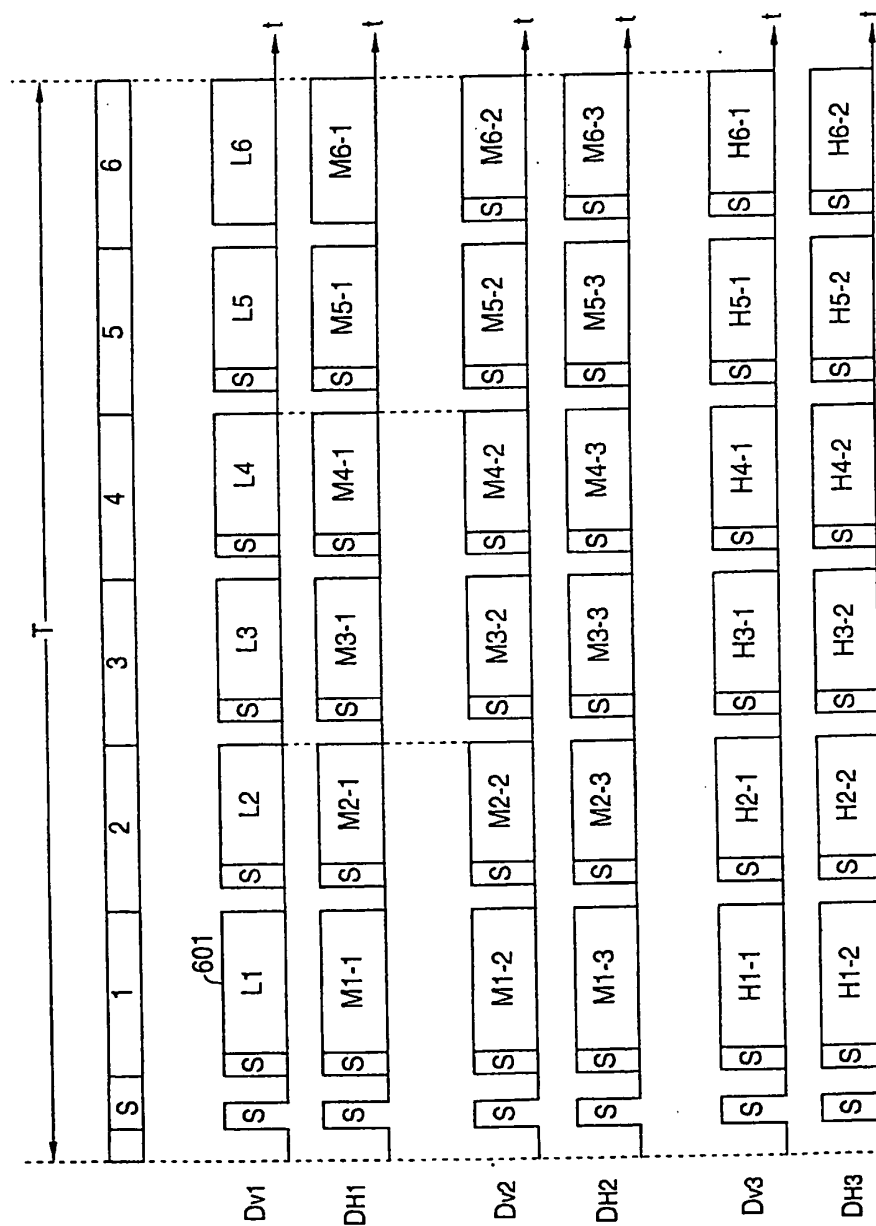


FIG. 52

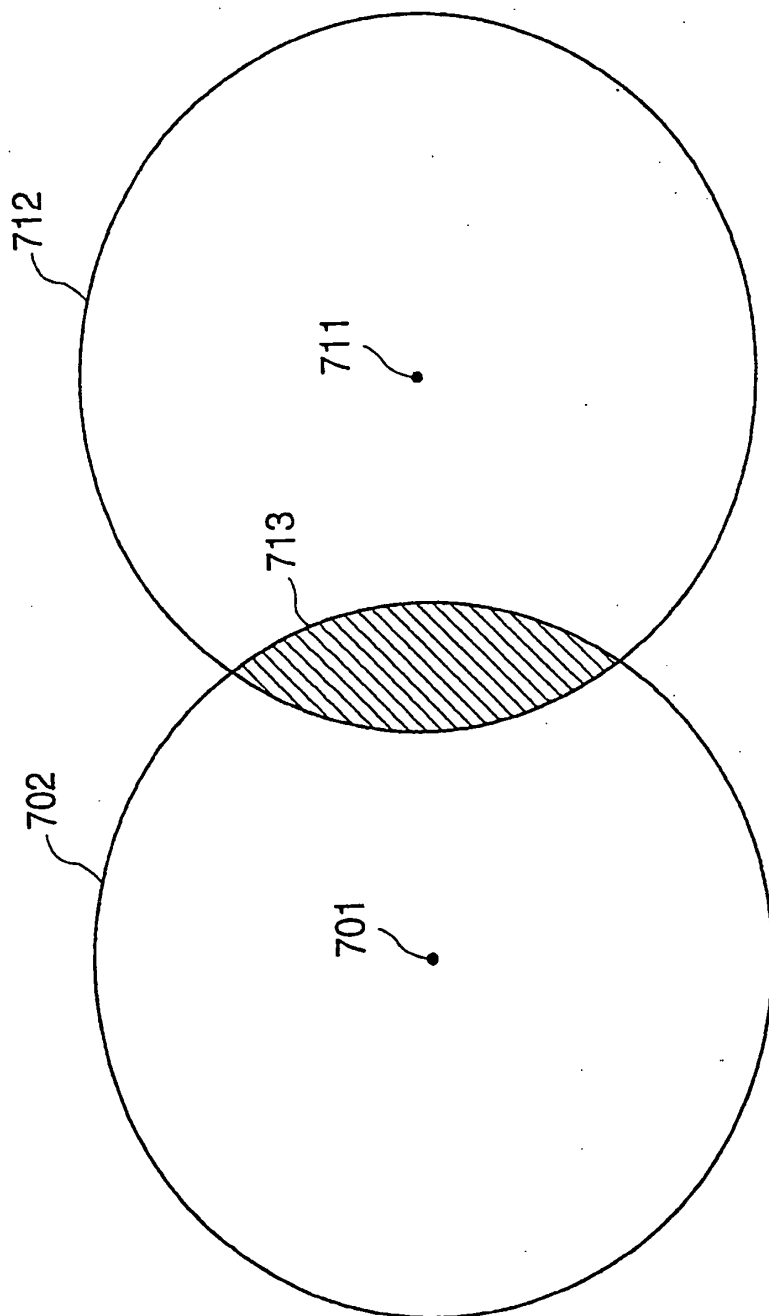
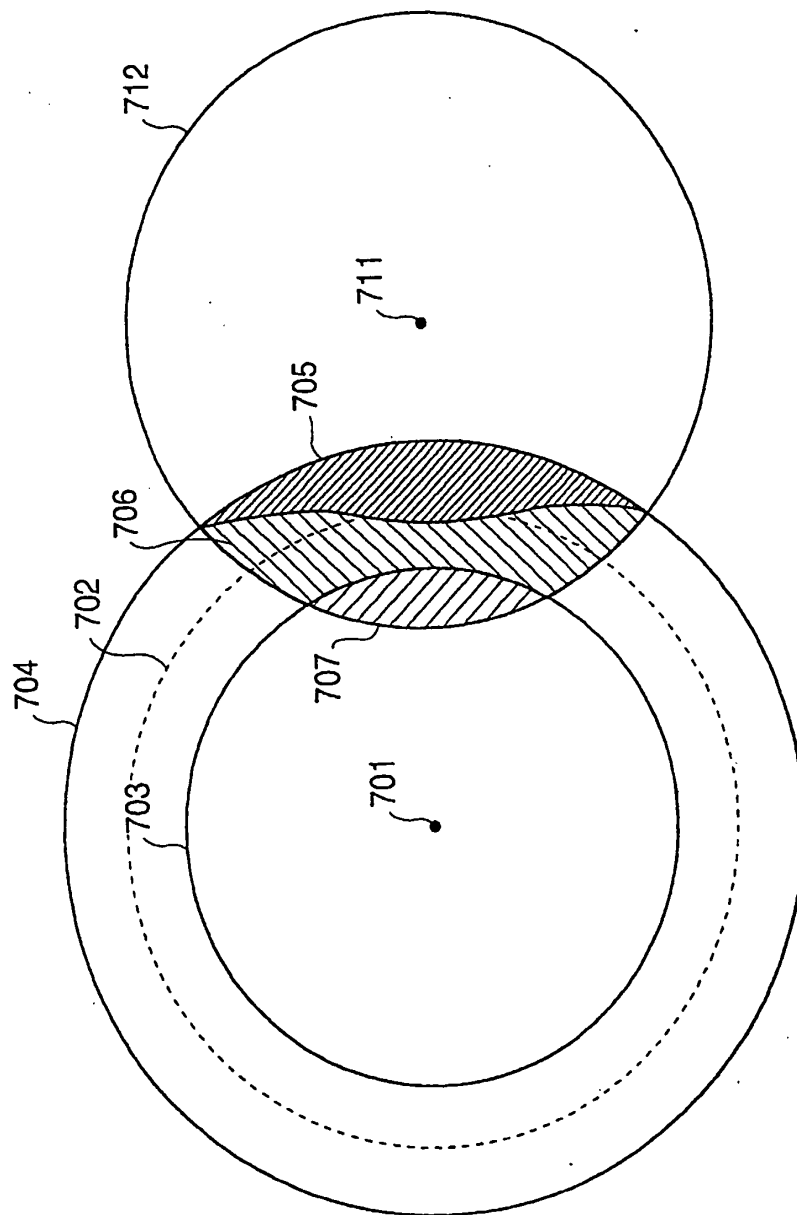


FIG. 53



**FIG. 54**

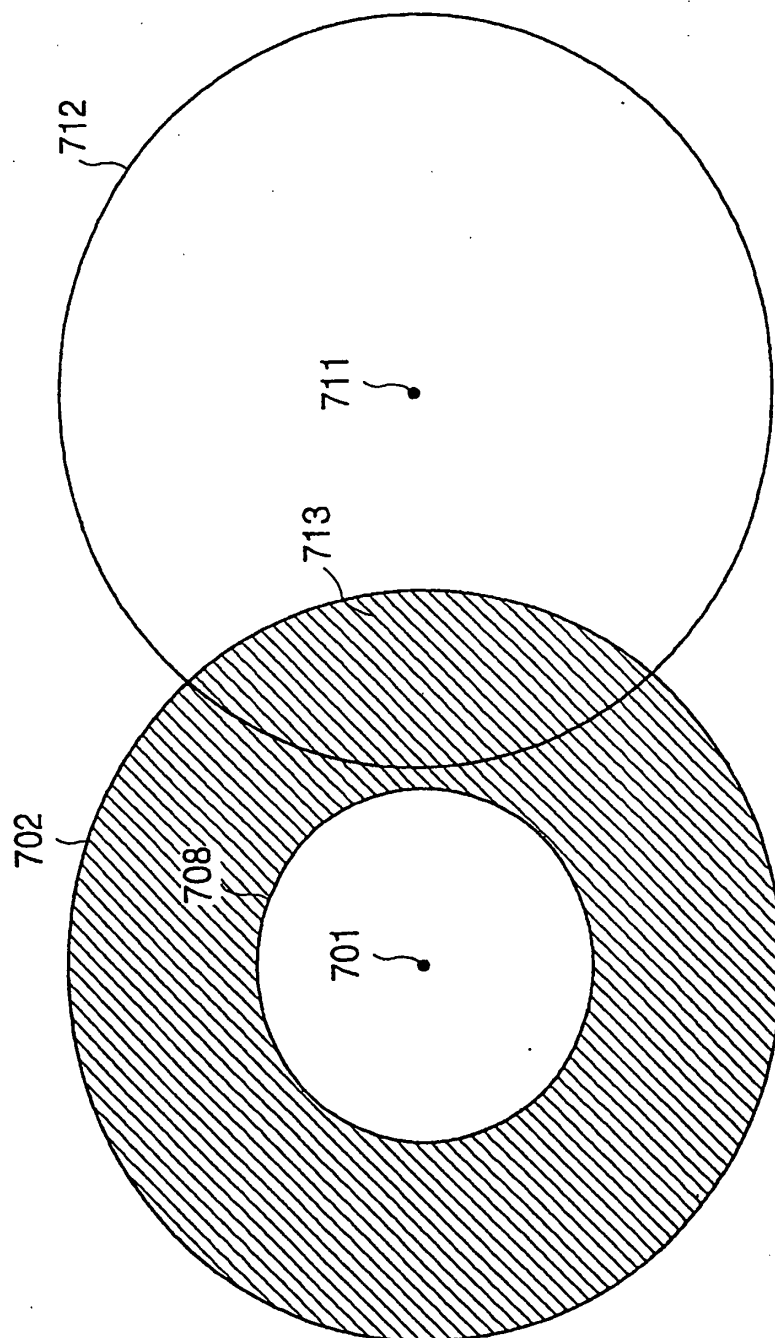


FIG. 55

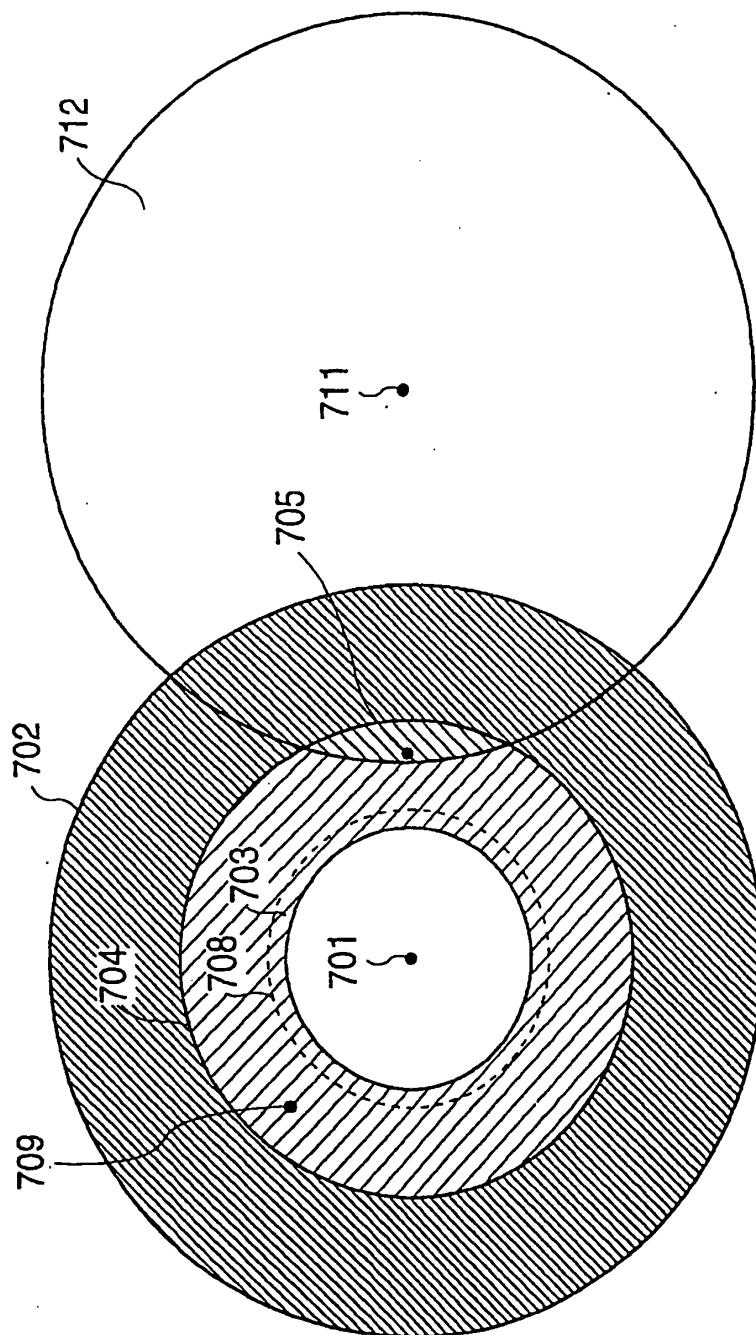




FIG. 56

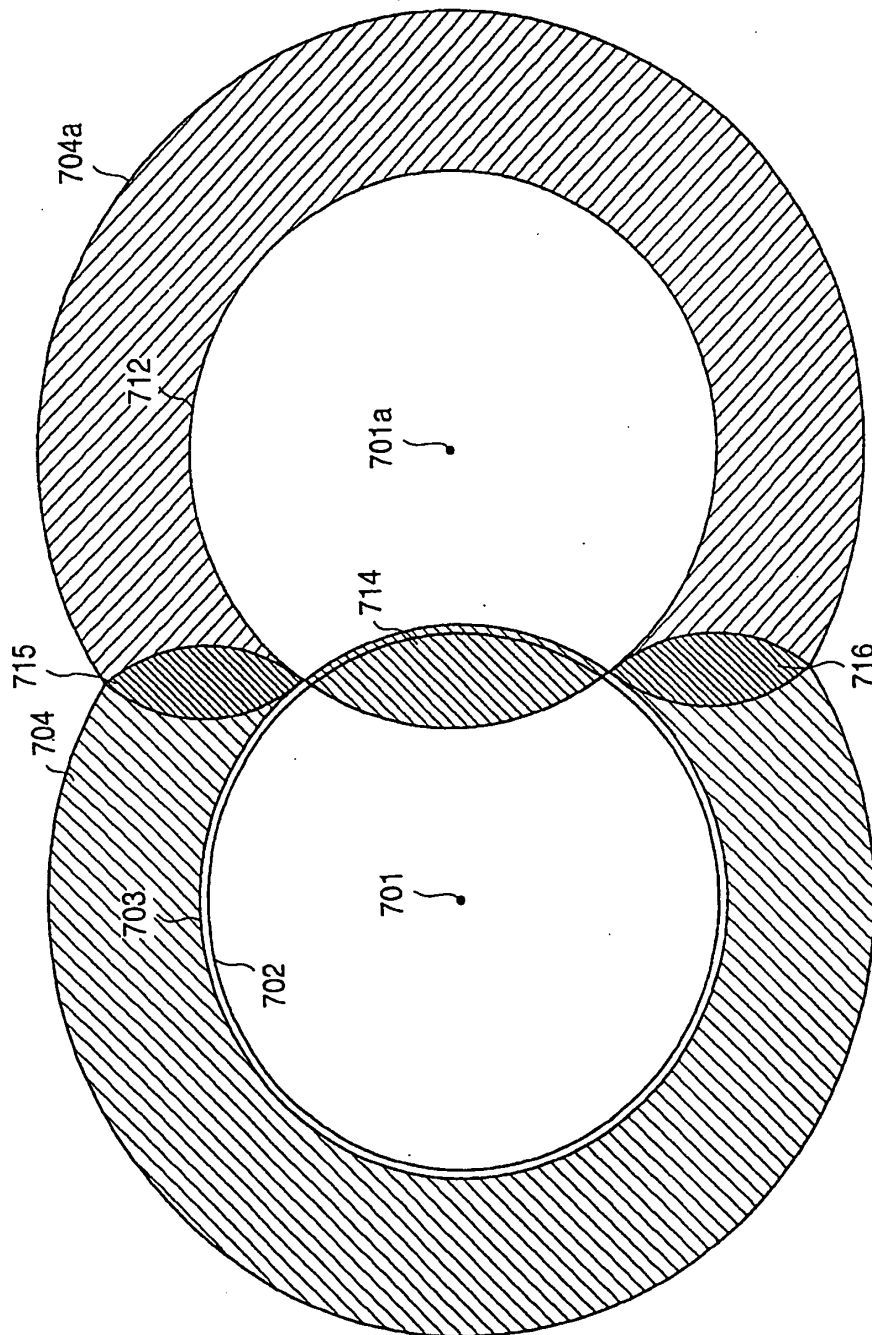


FIG. 57

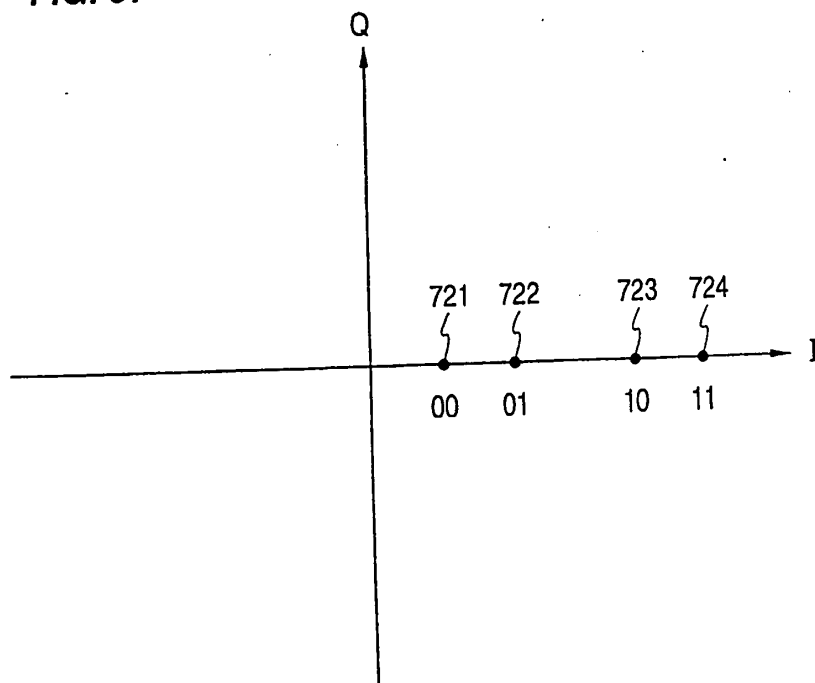


FIG. 58

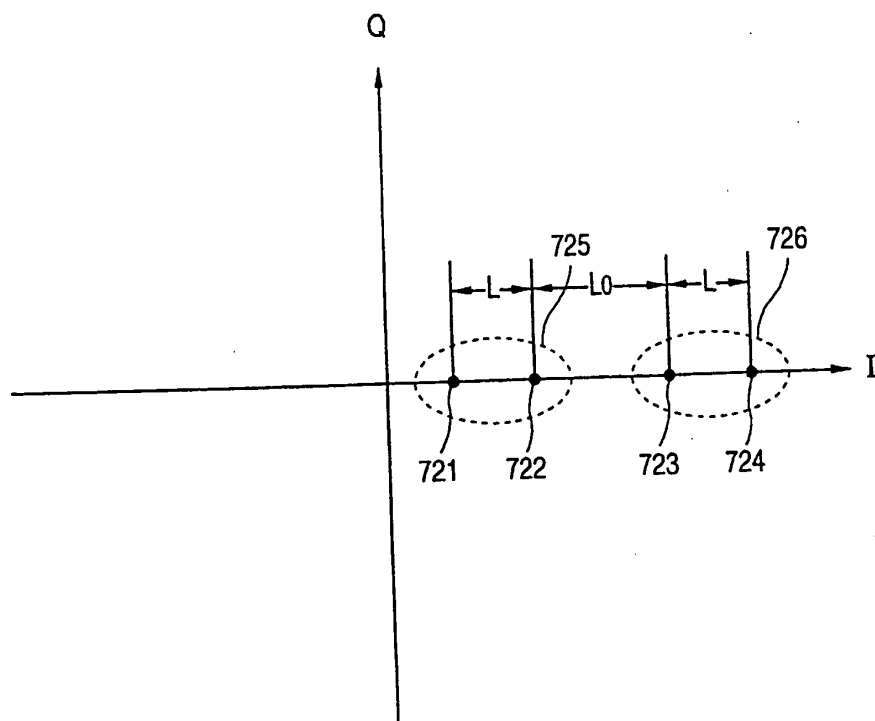


FIG. 59(c)

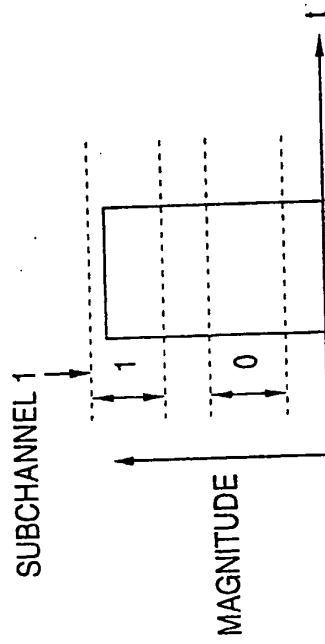


FIG. 59(d)

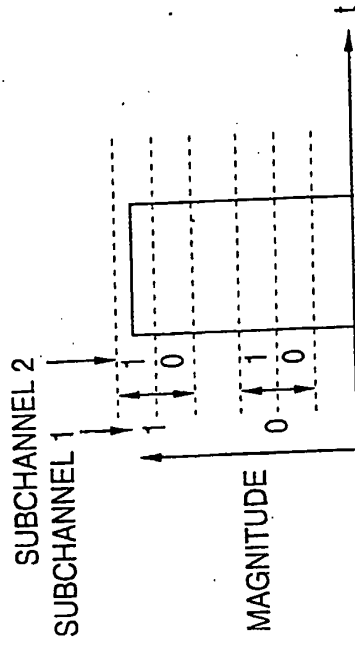


FIG. 59(a)

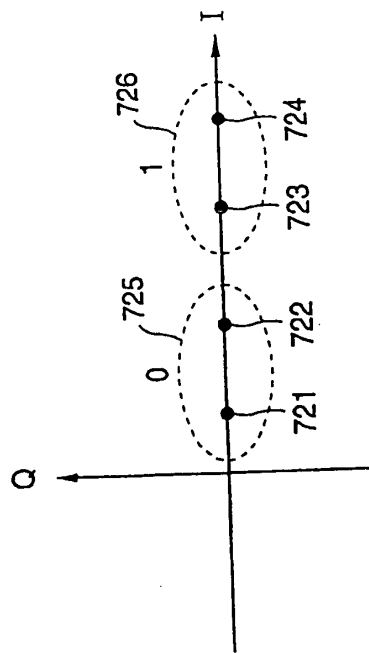


FIG. 59(b)

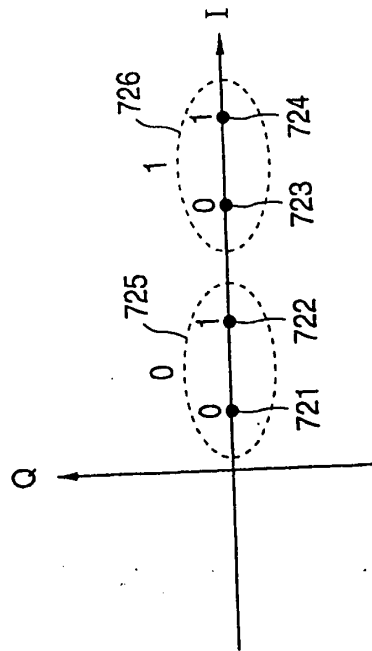


FIG. 60

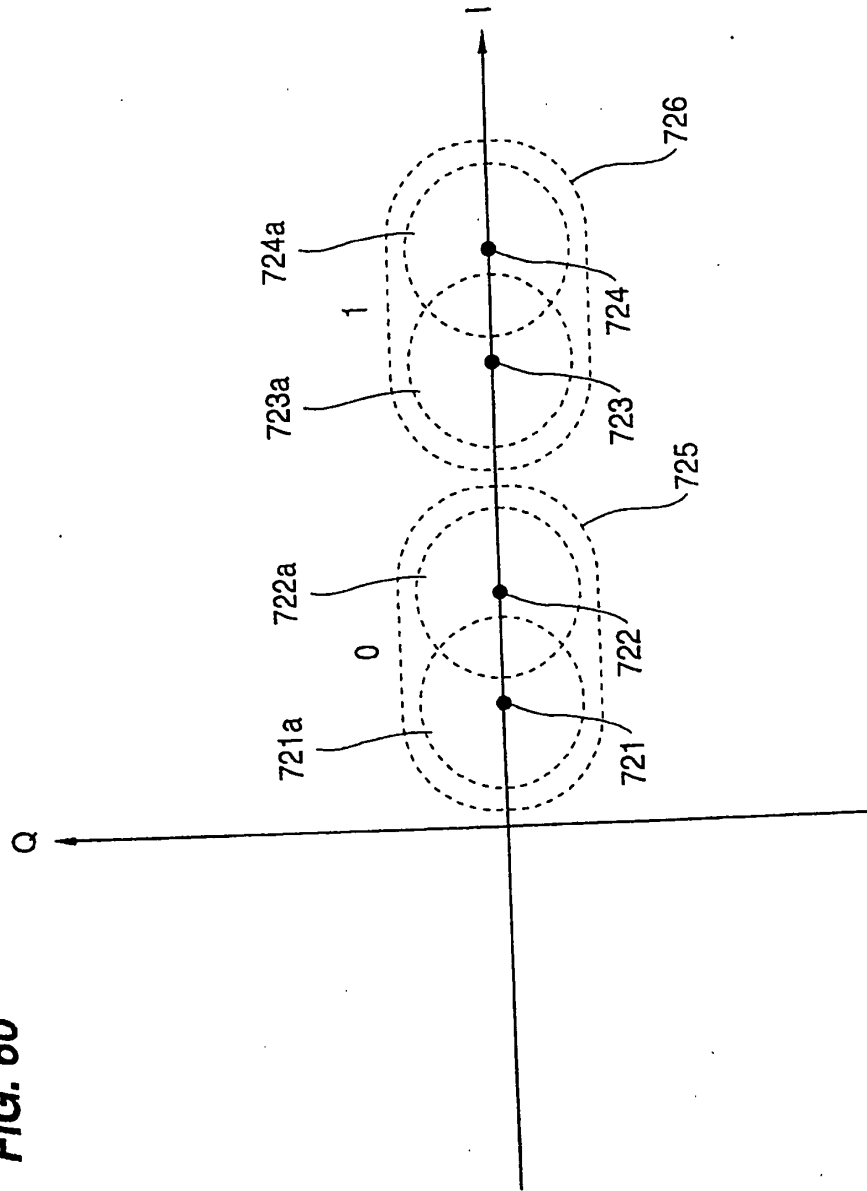


FIG. 61

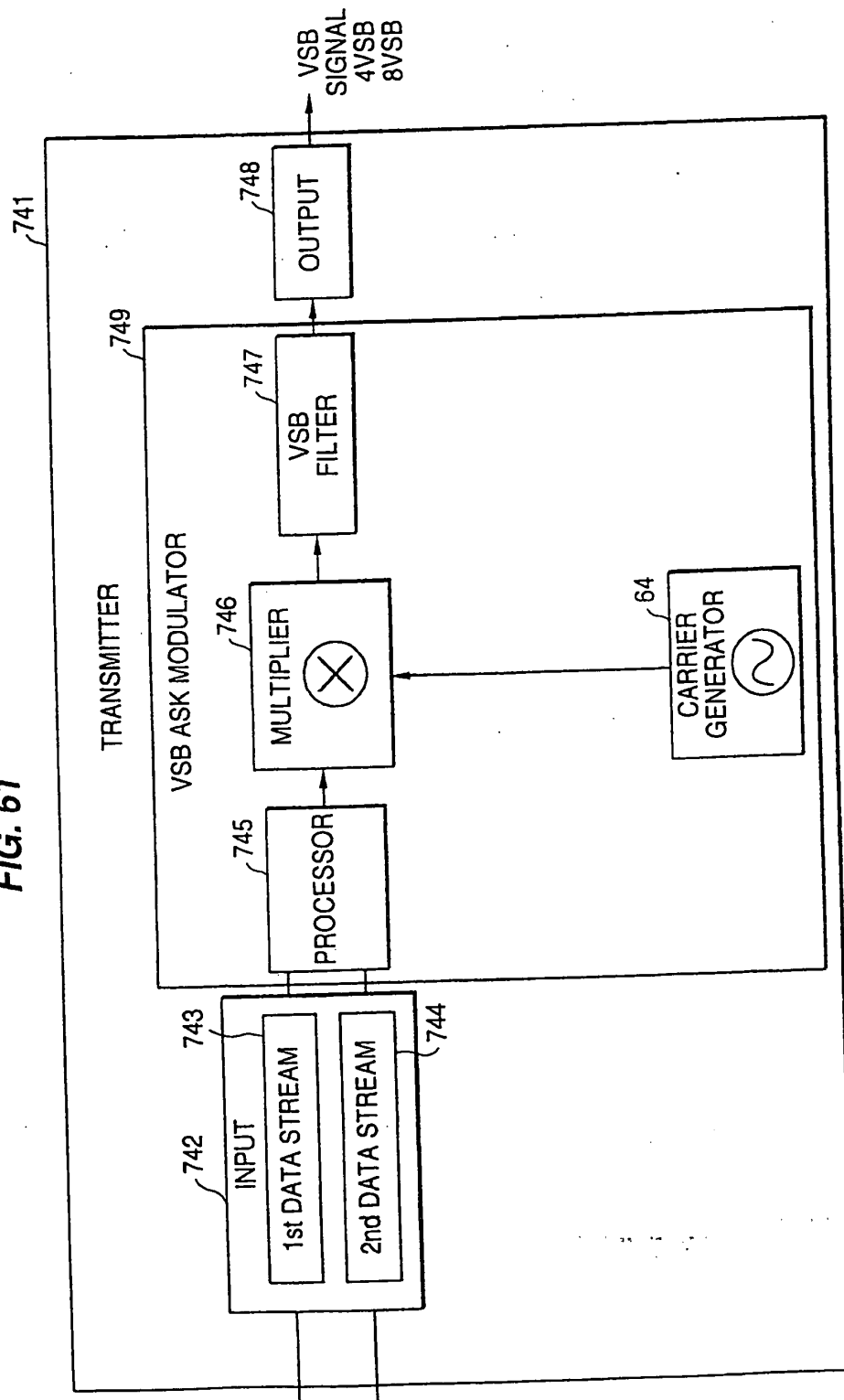


FIG. 62(a)

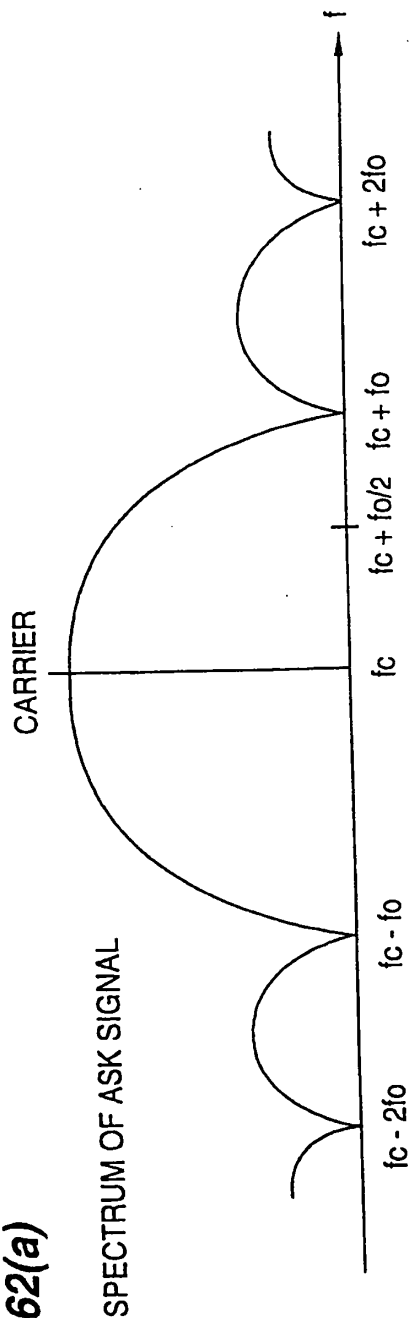


FIG. 62(b)

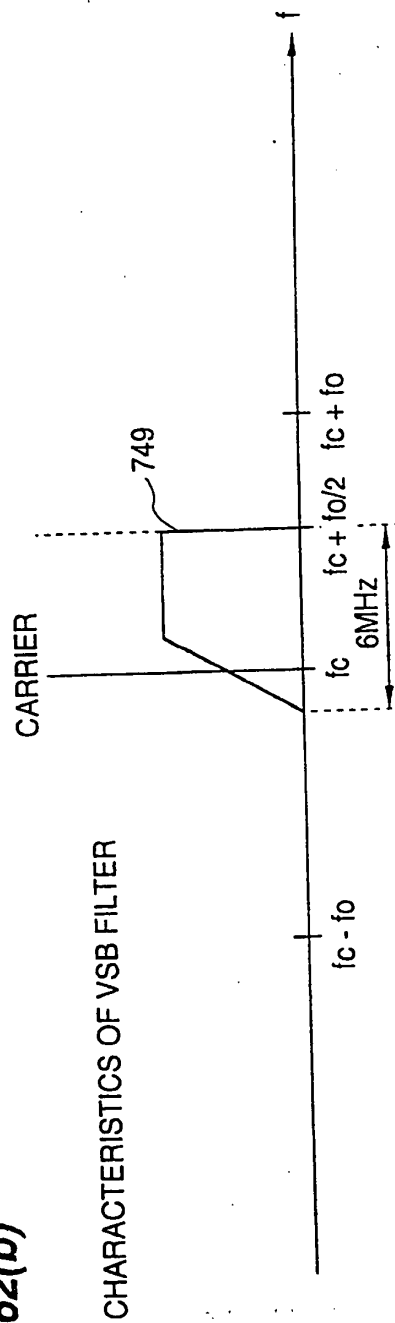


FIG. 63

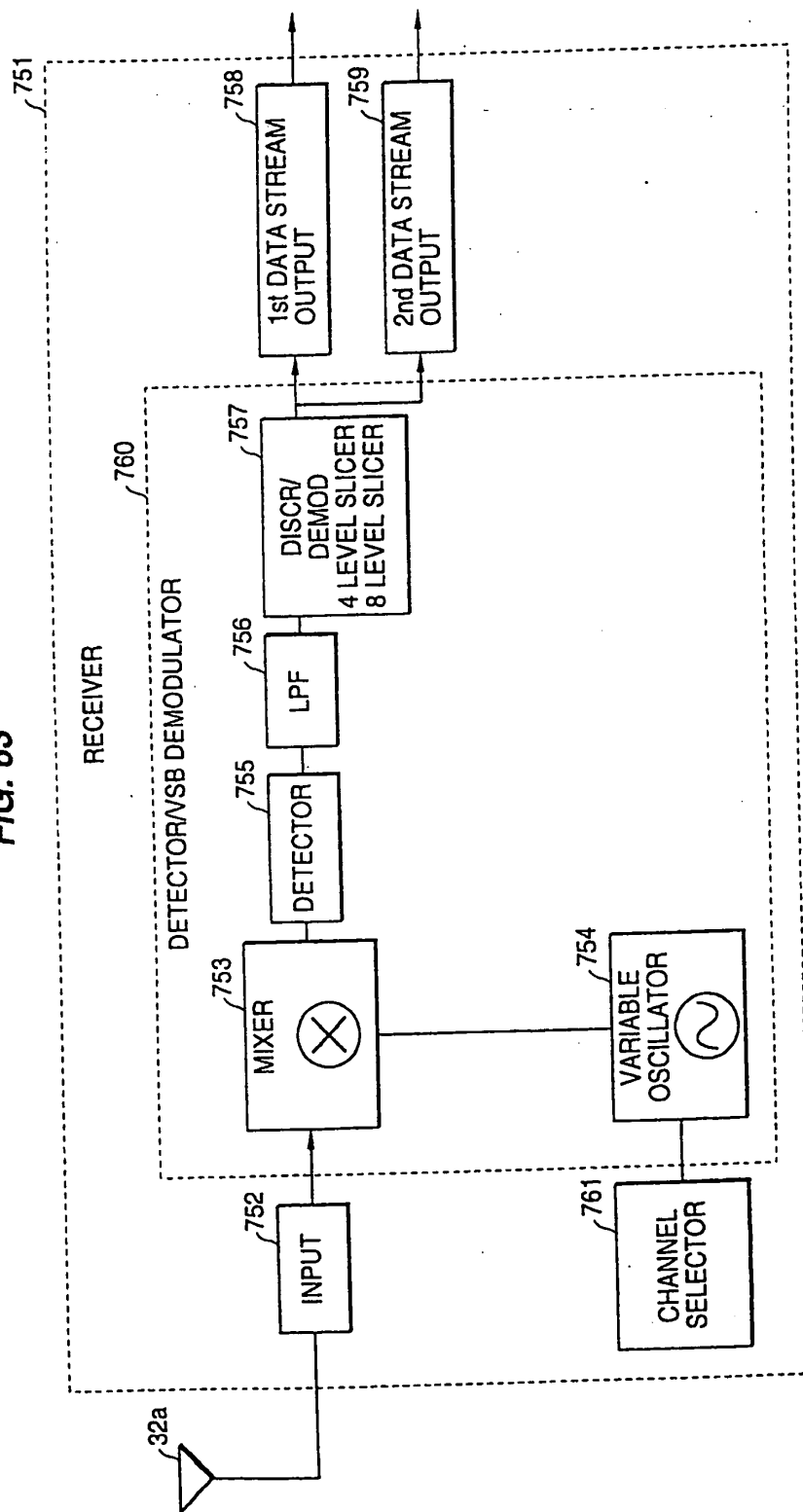


FIG. 64

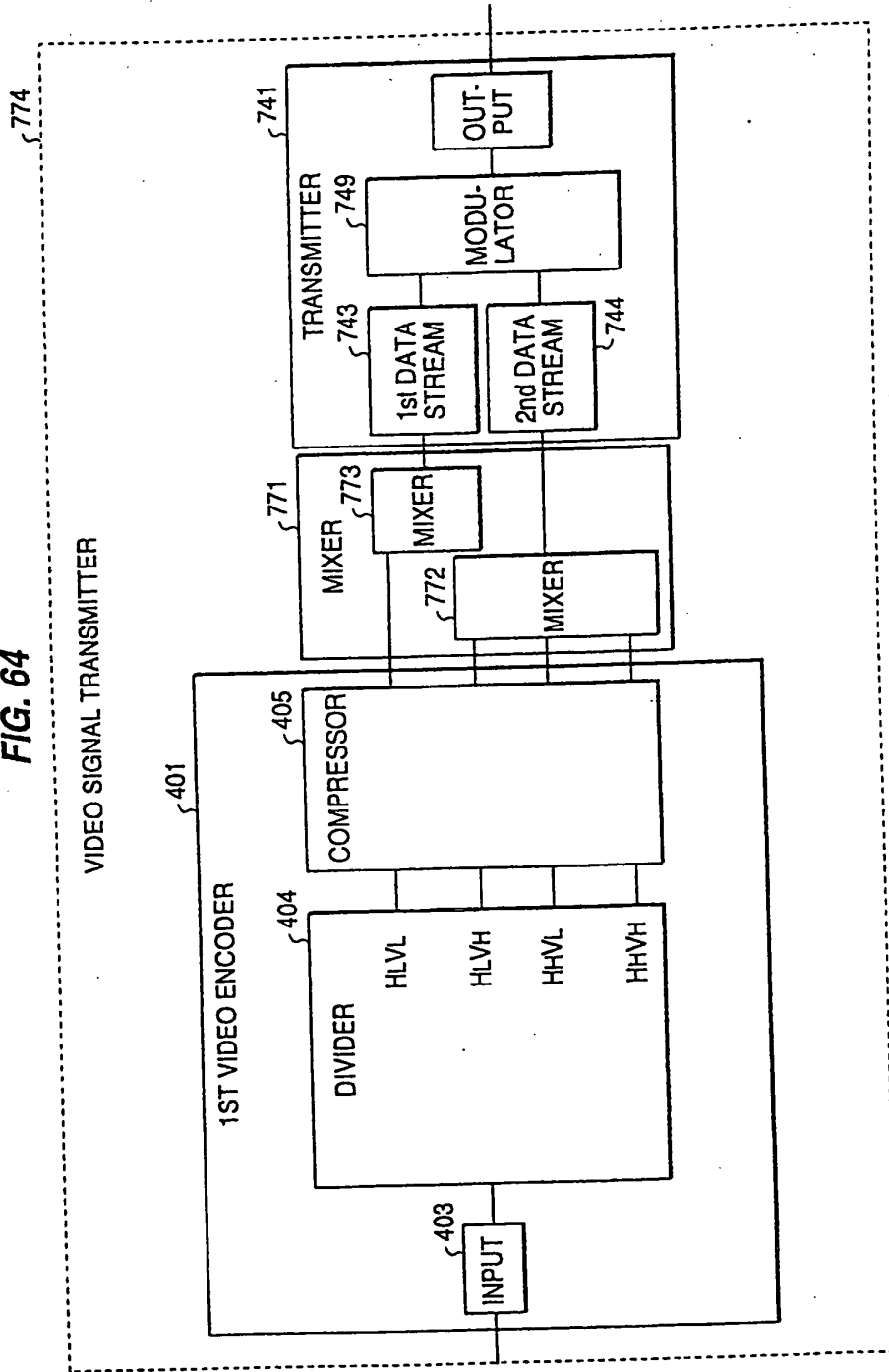




FIG. 65

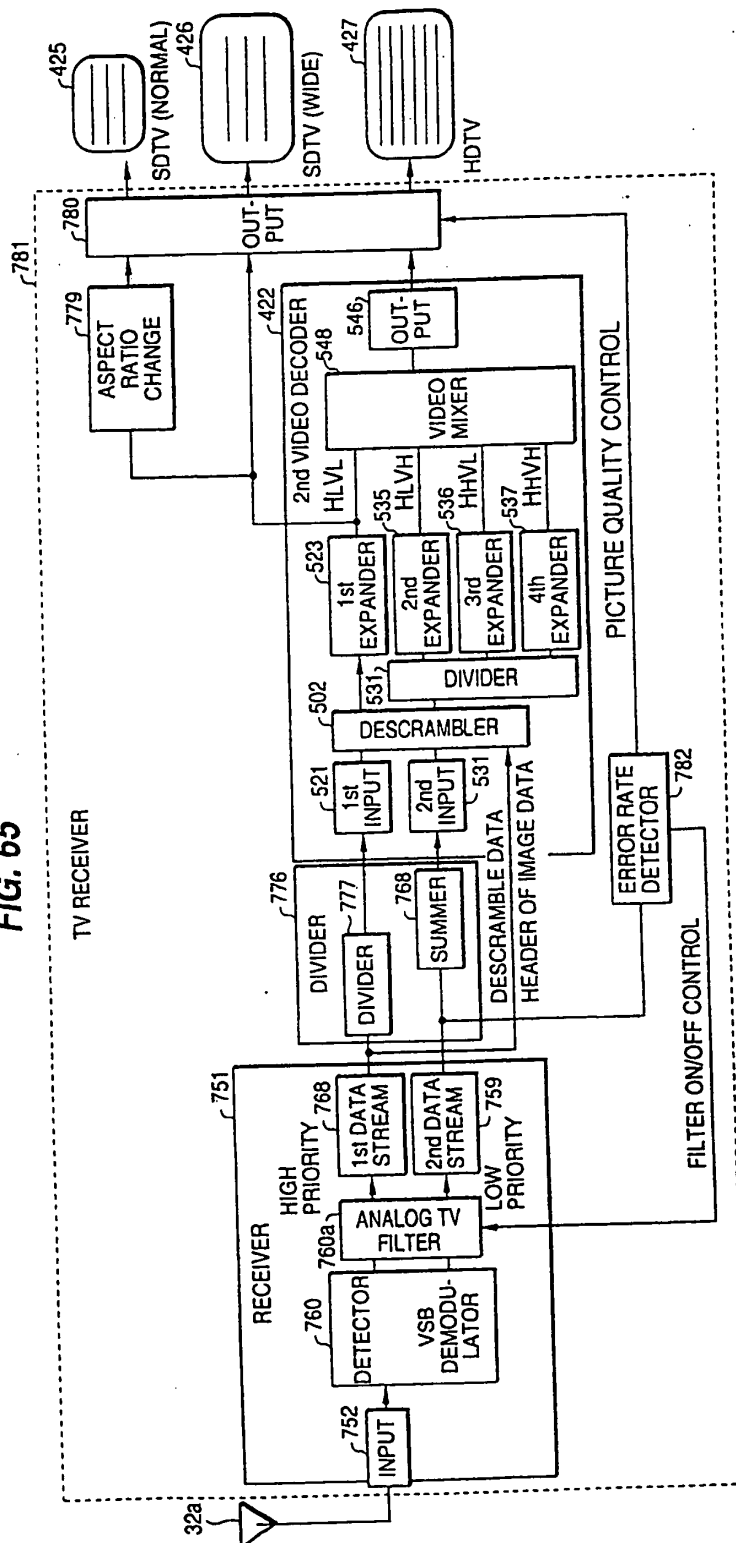
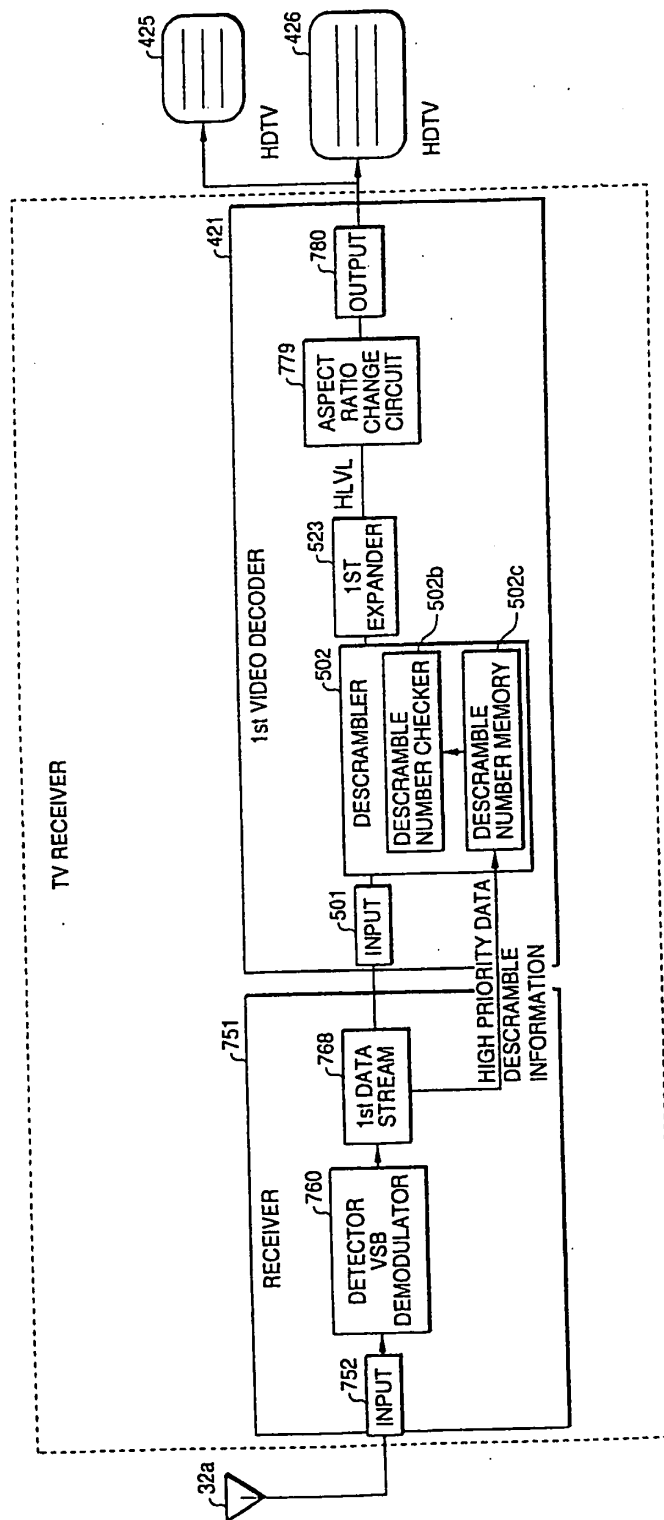
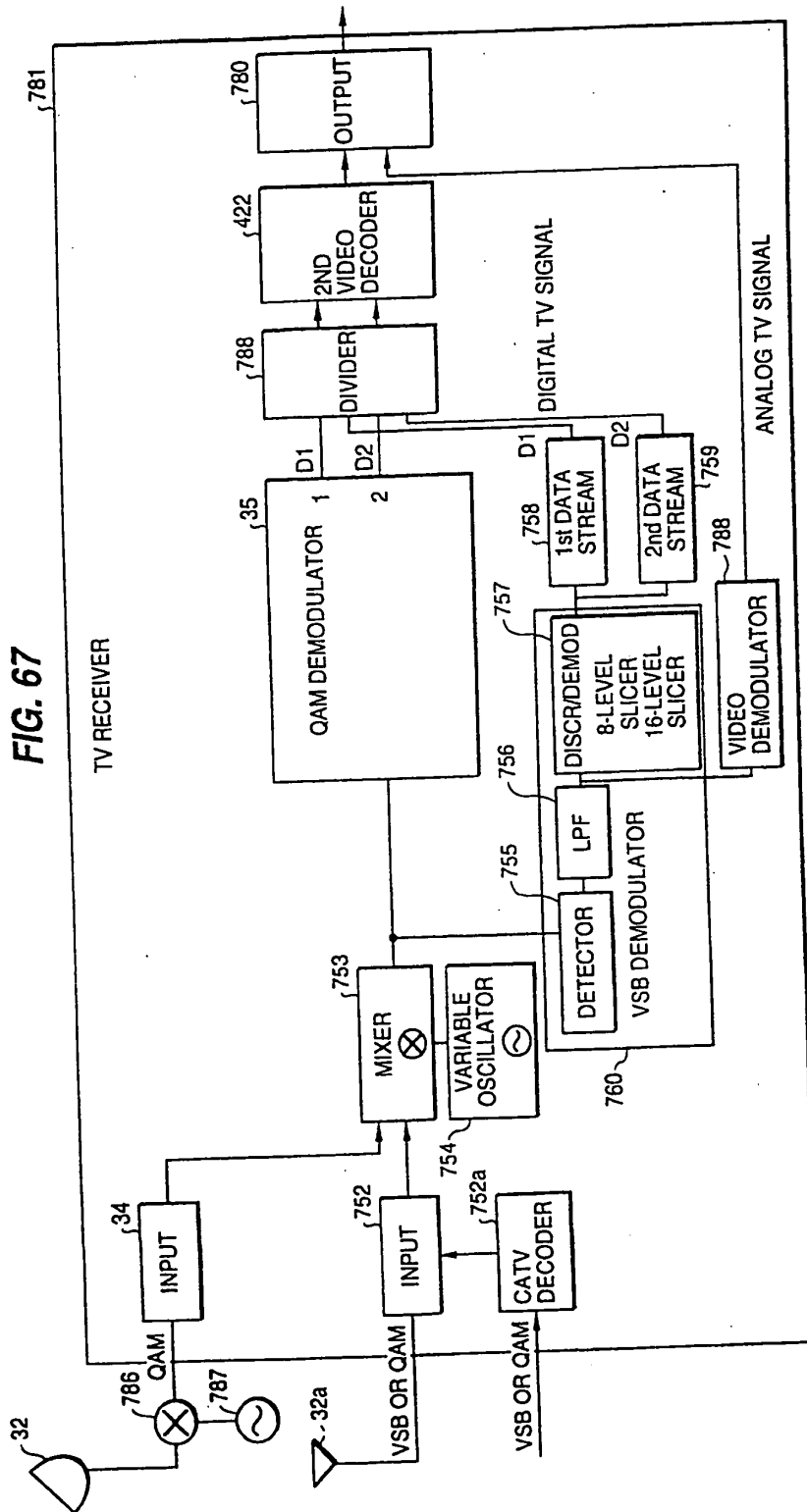
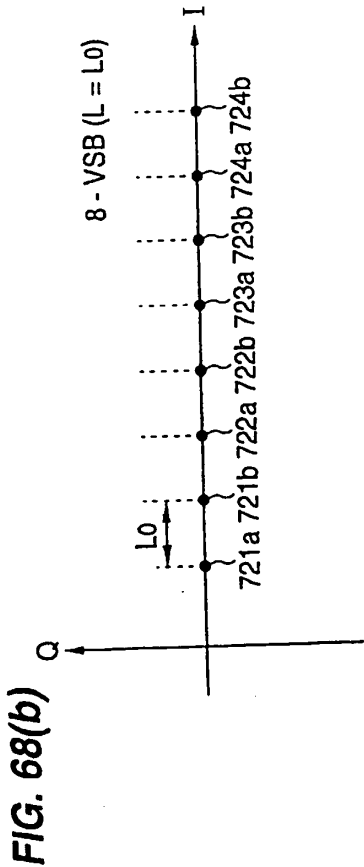
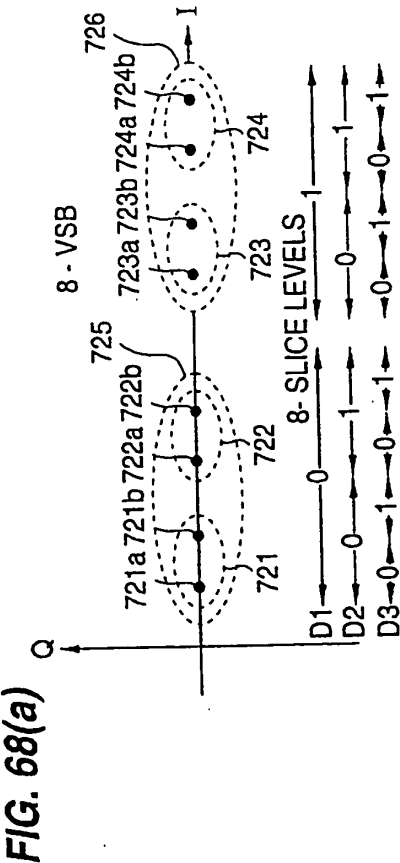


FIG. 66







**FIG. 68(c)**

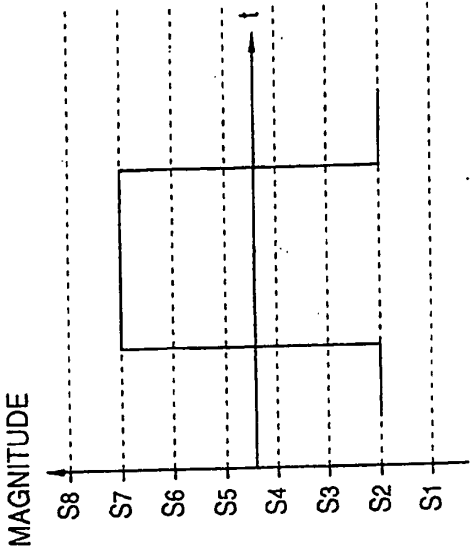


FIG. 69

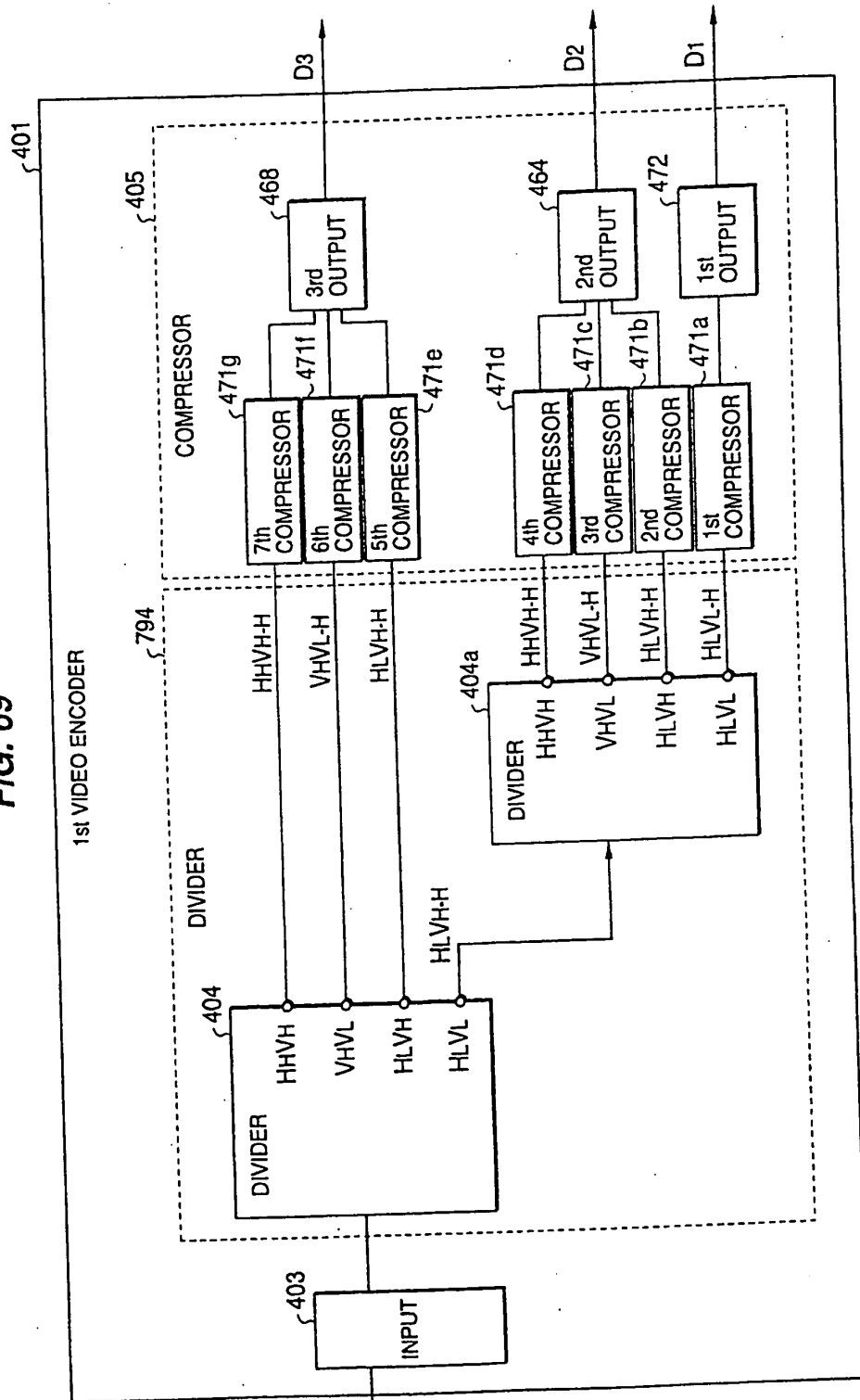


FIG. 70

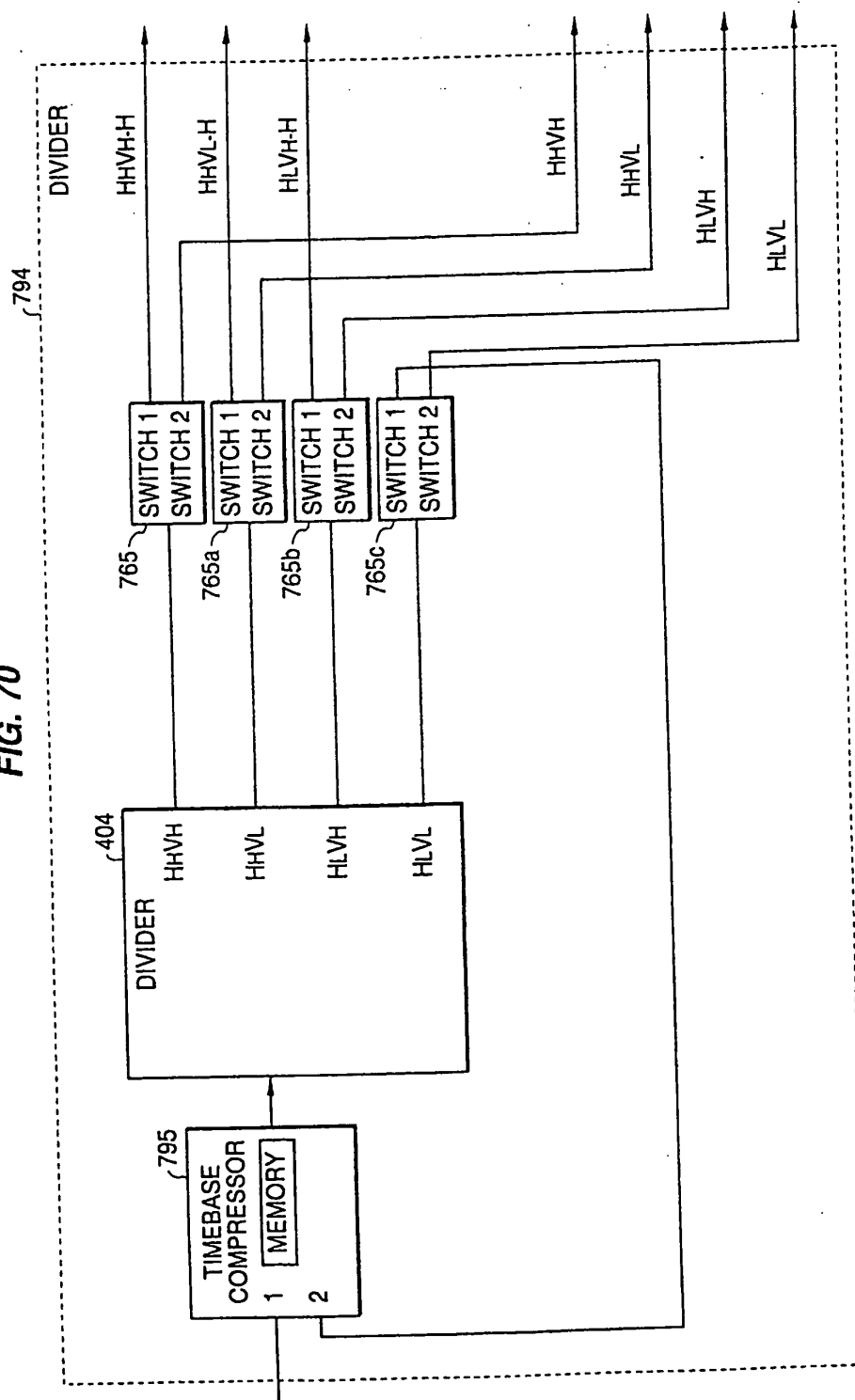


FIG. 71

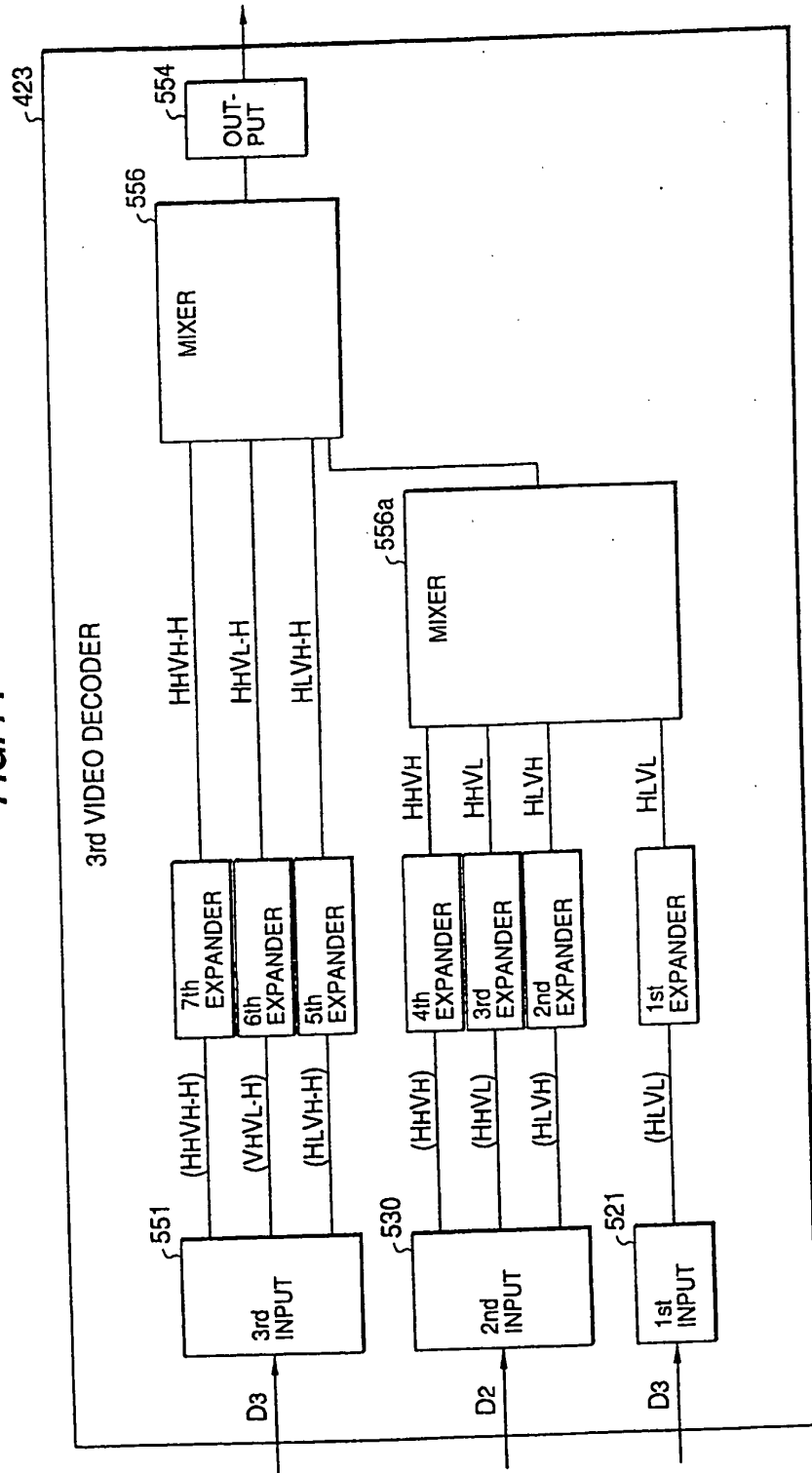


FIG. 72

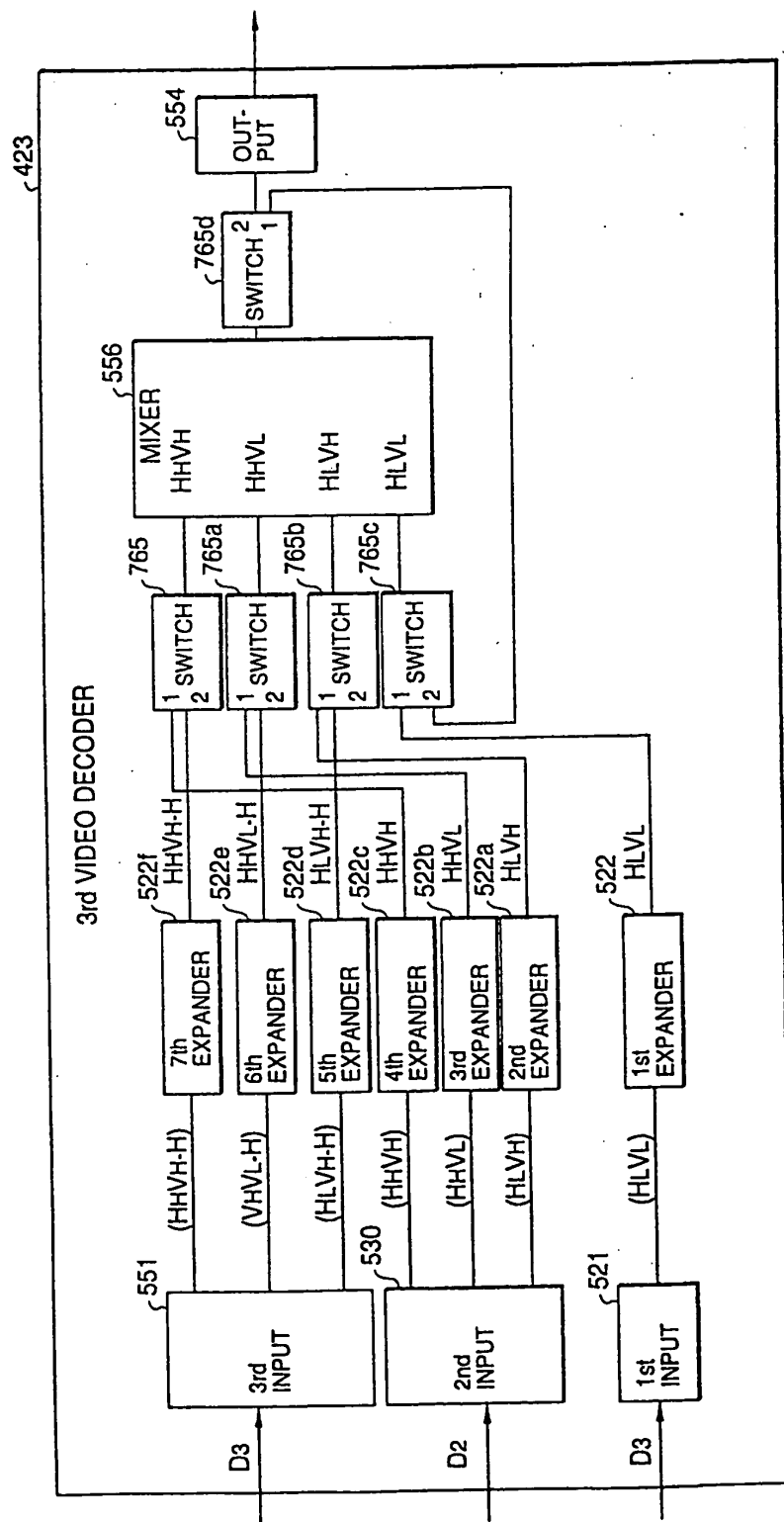




FIG. 73

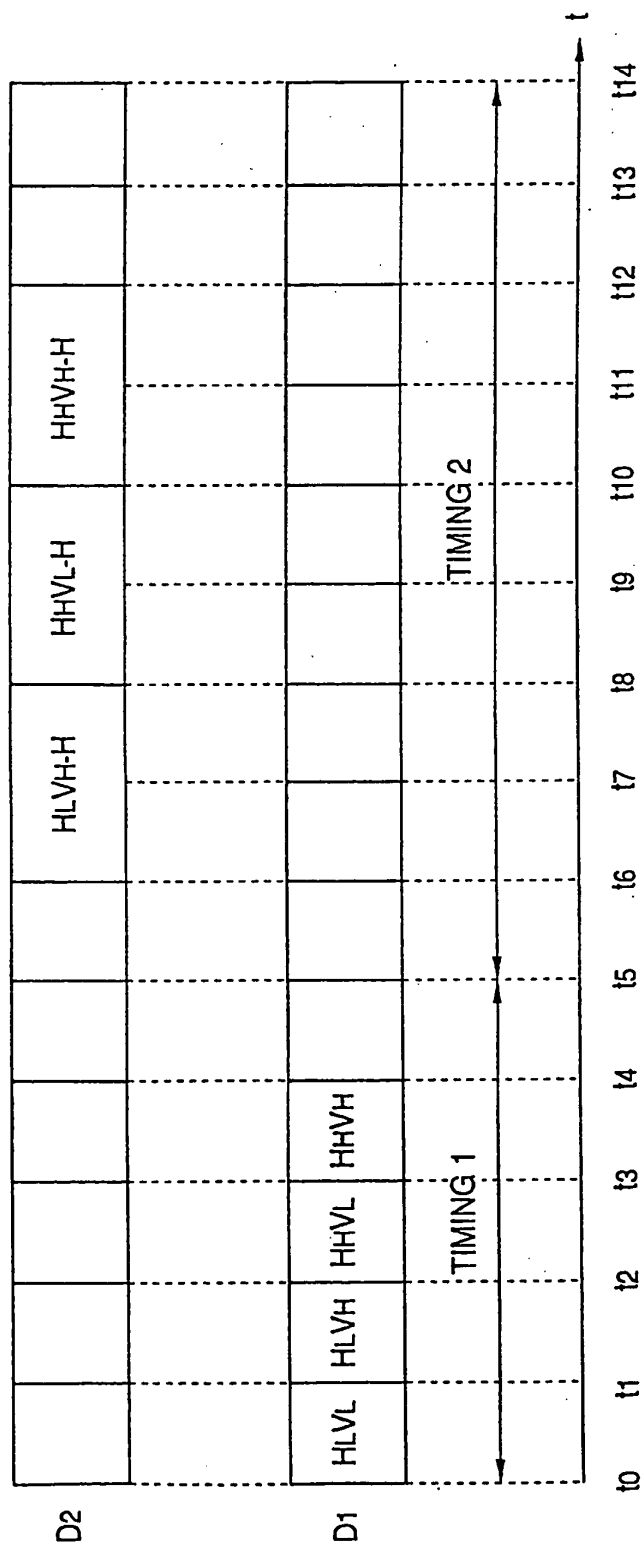


FIG. 74(a)

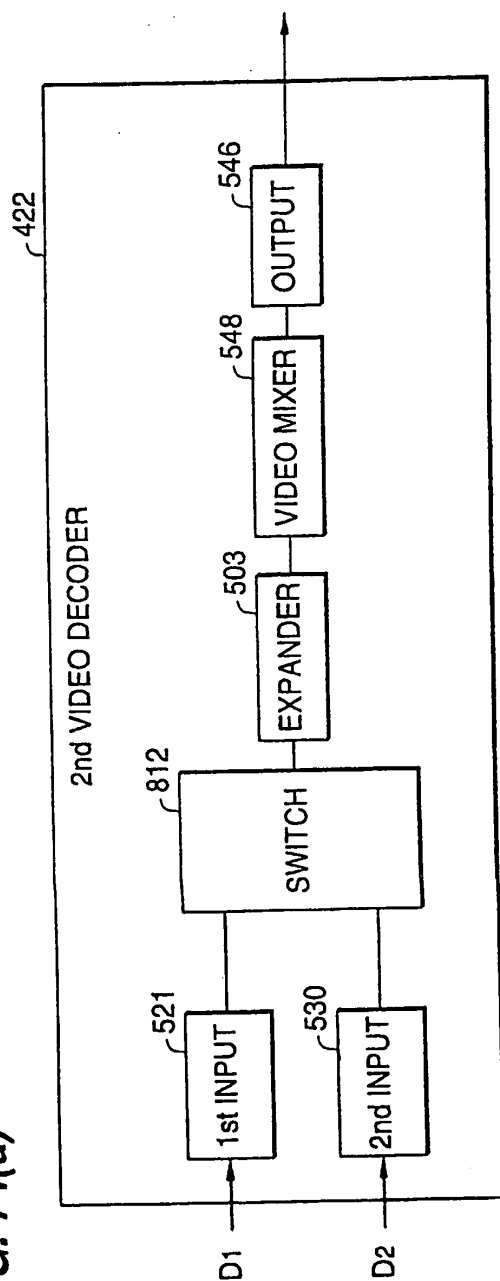
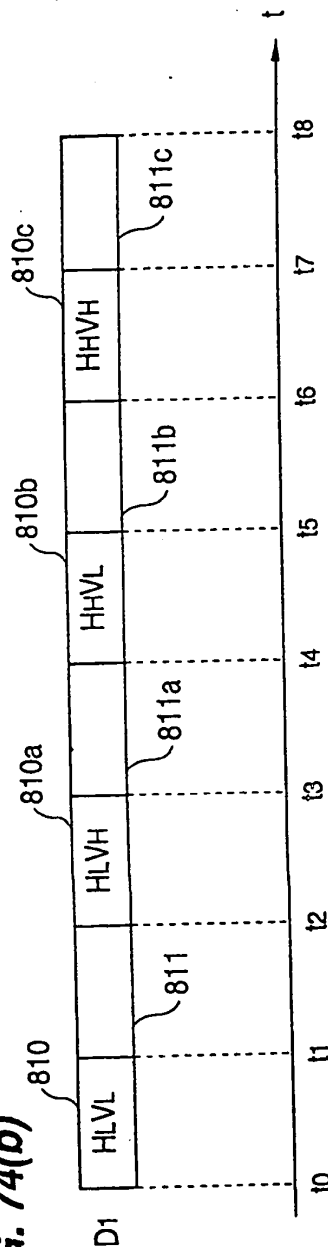


FIG. 74(b)



**FIG. 75**

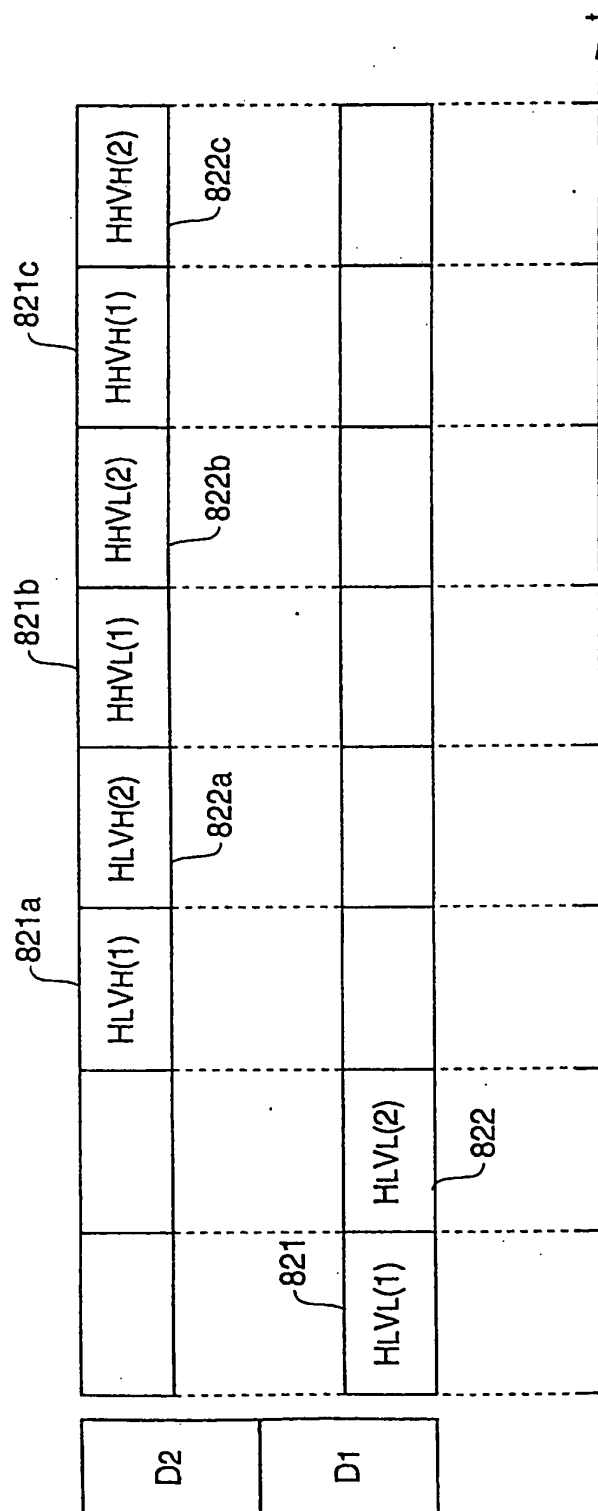


FIG. 76

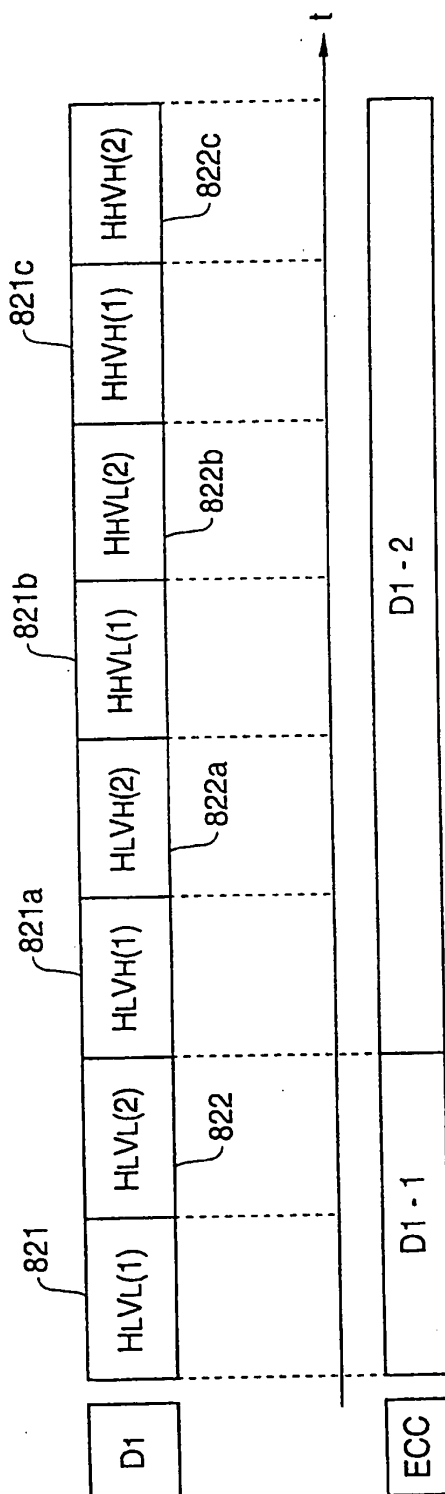


FIG. 77

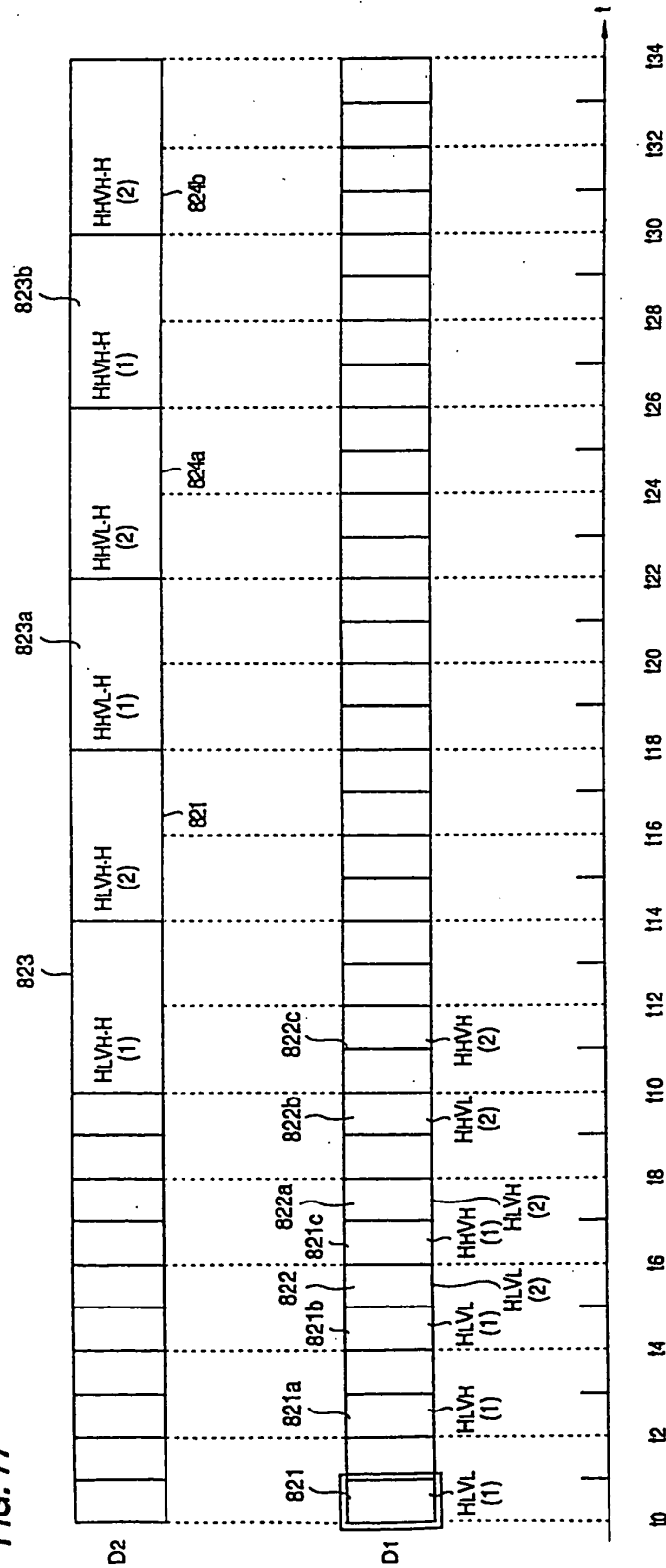


FIG. 78

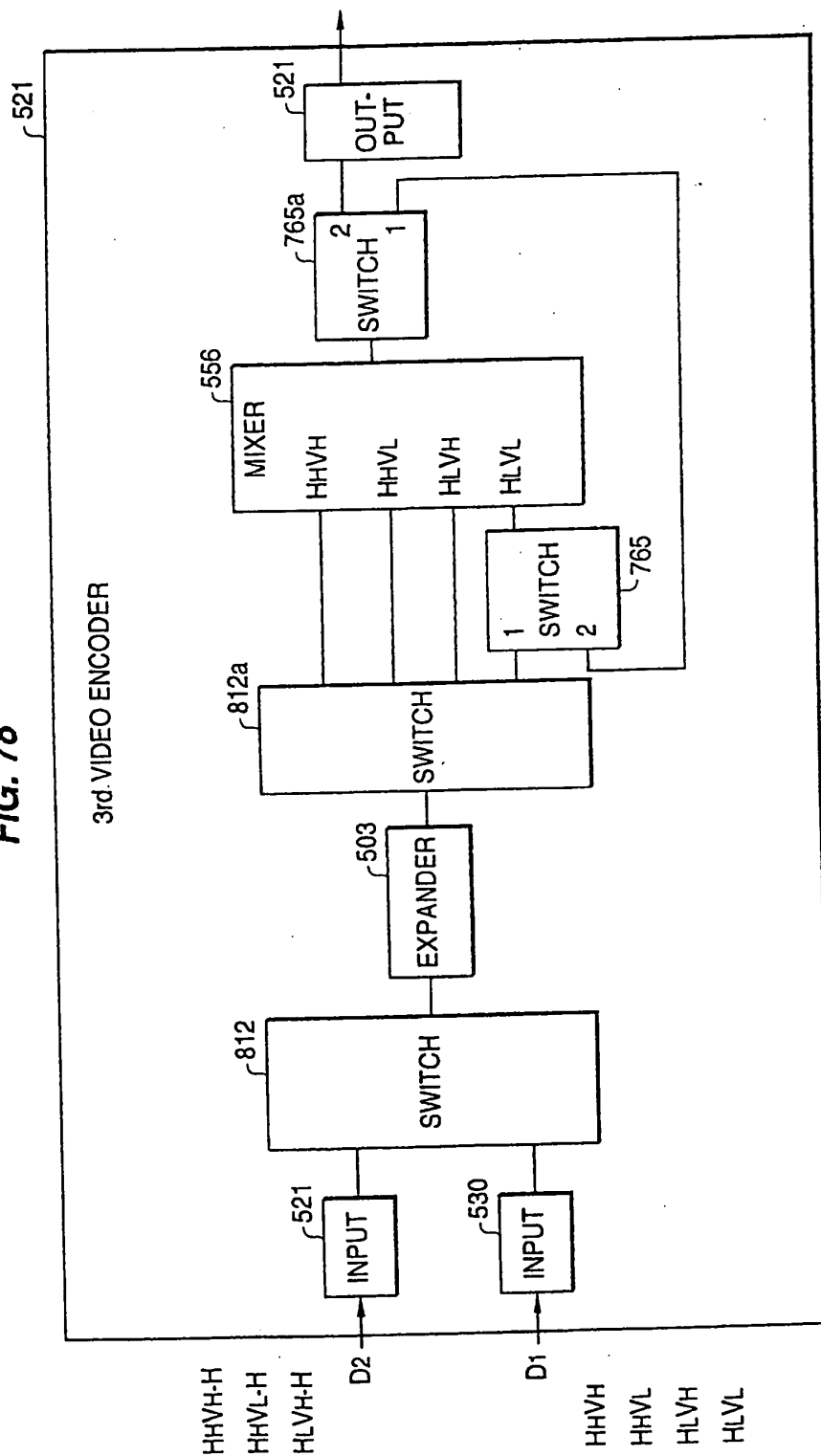


FIG. 79

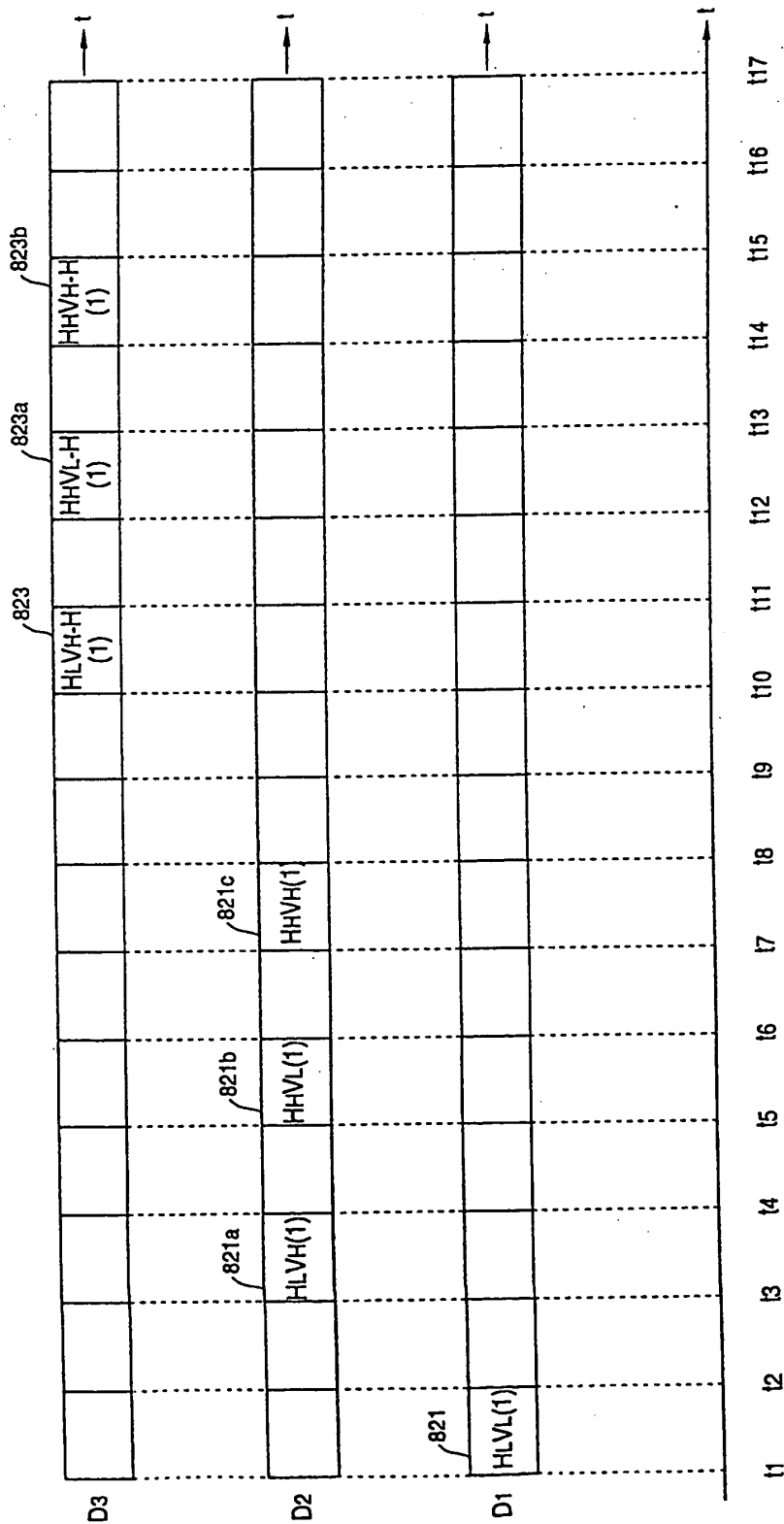


FIG. 80

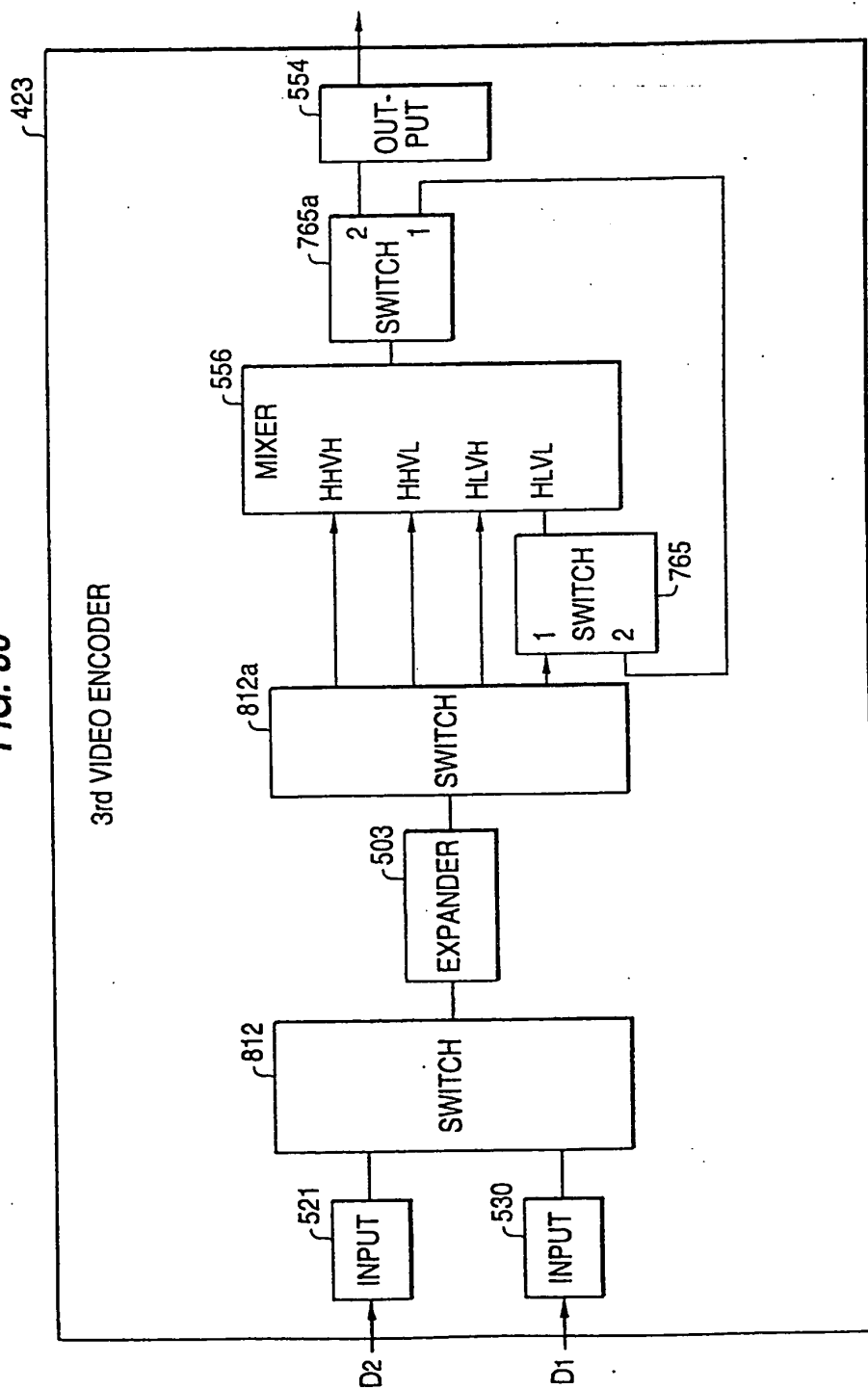




FIG. 81

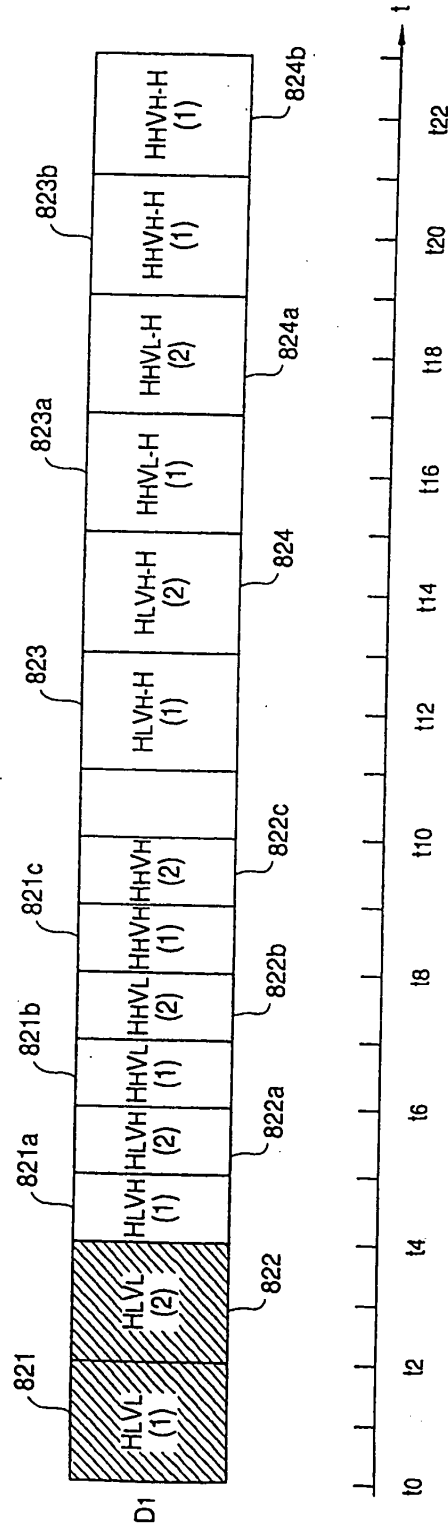


FIG. 82

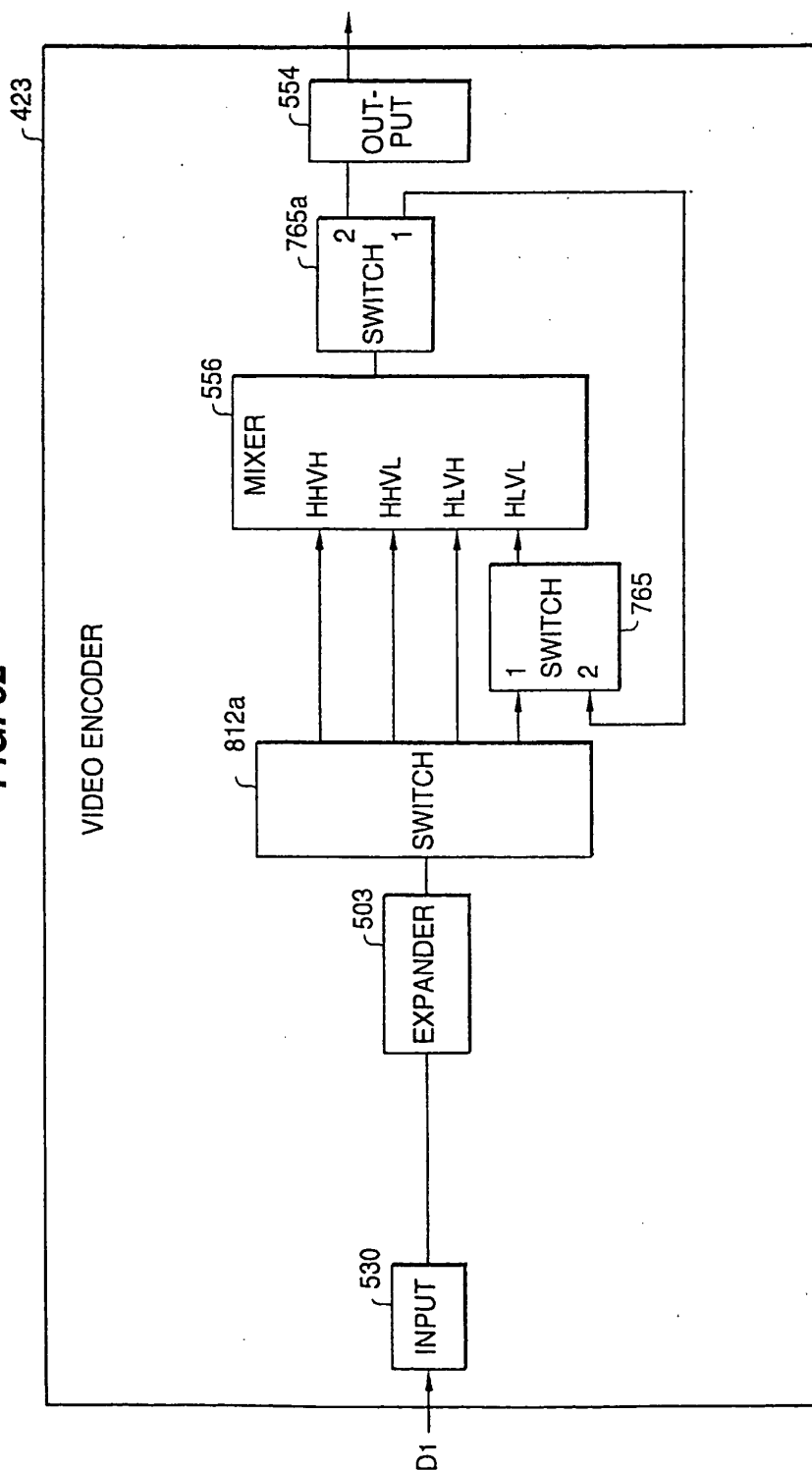


FIG. 83

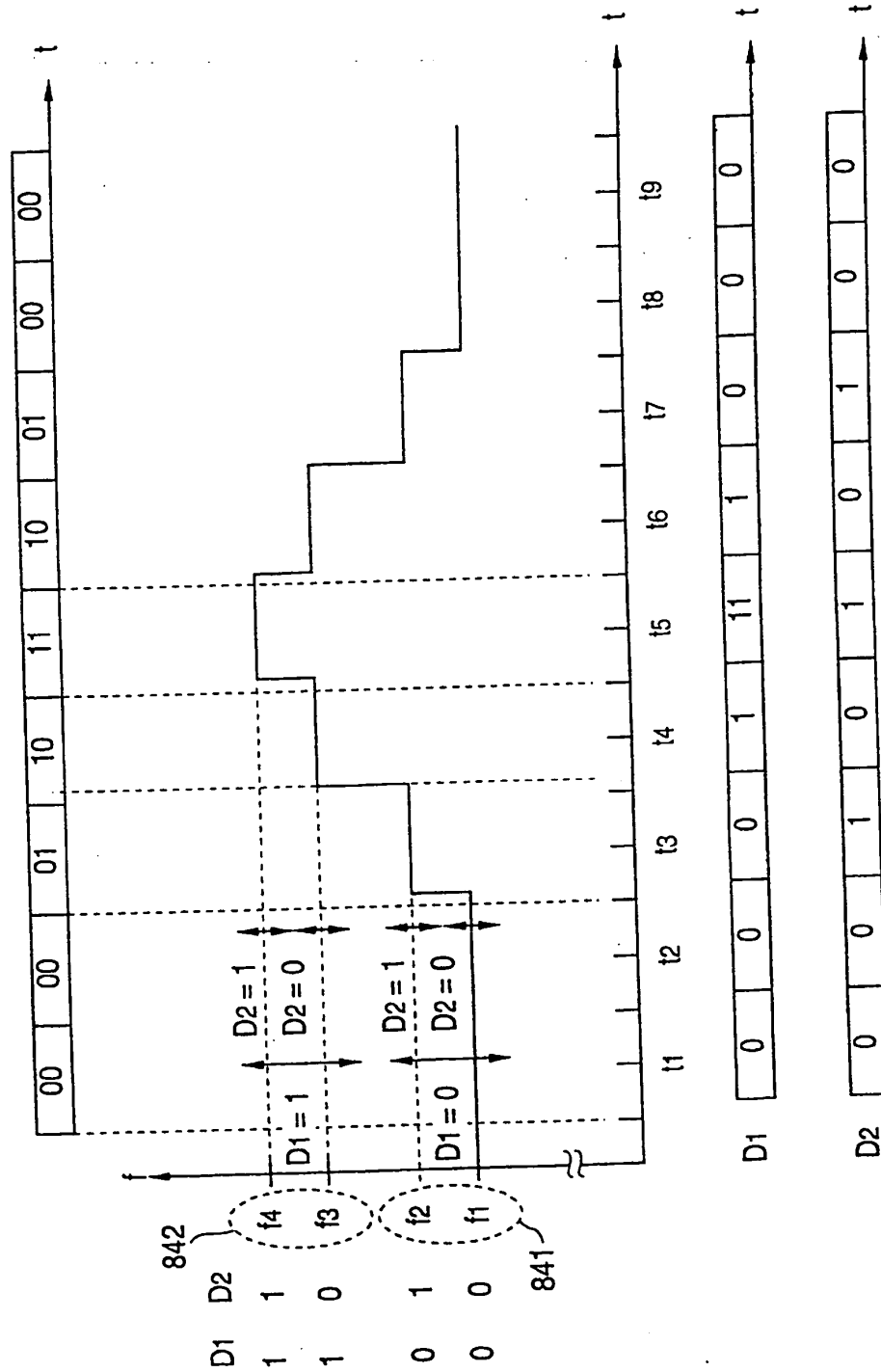


FIG. 84

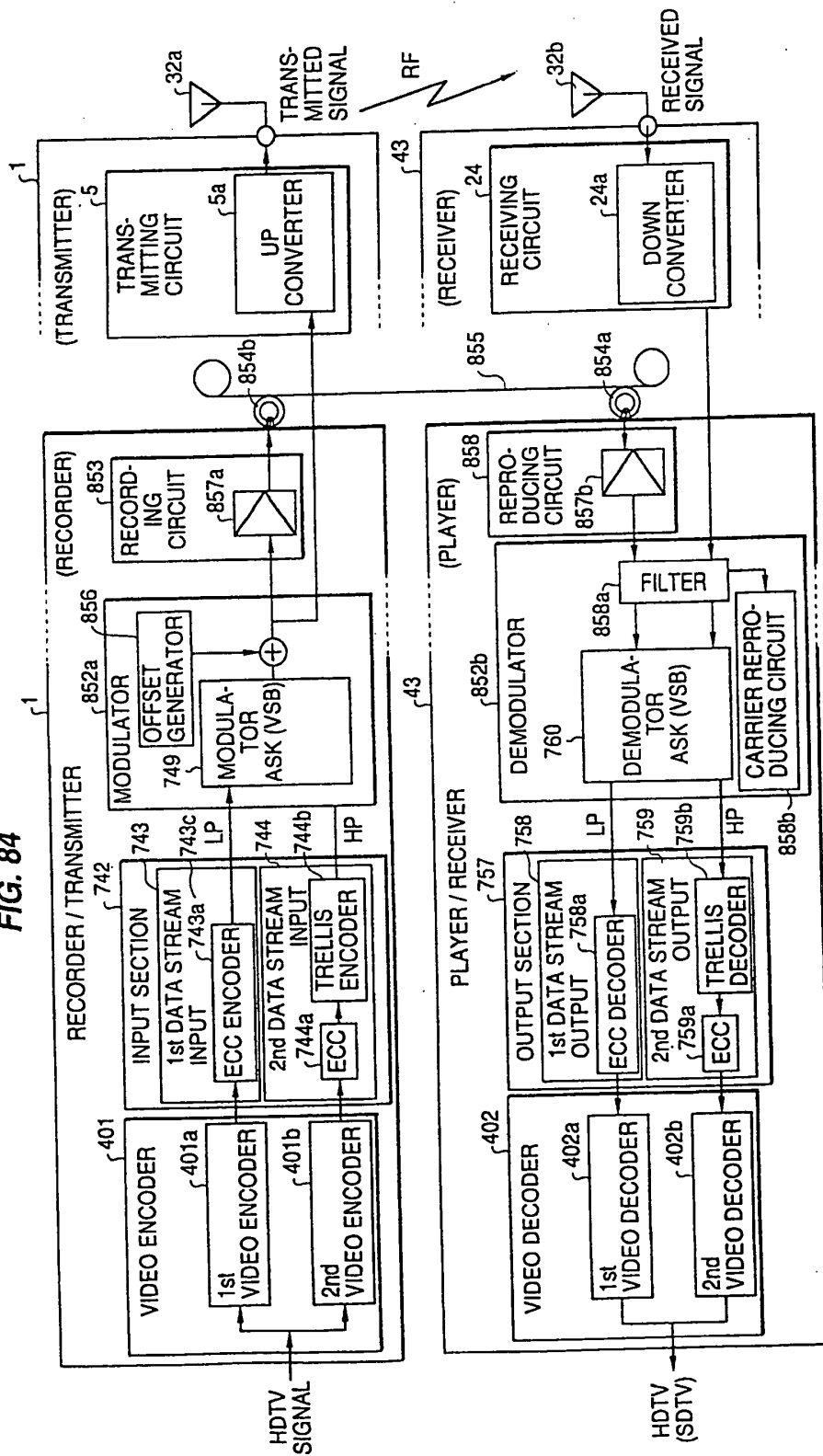


FIG. 85

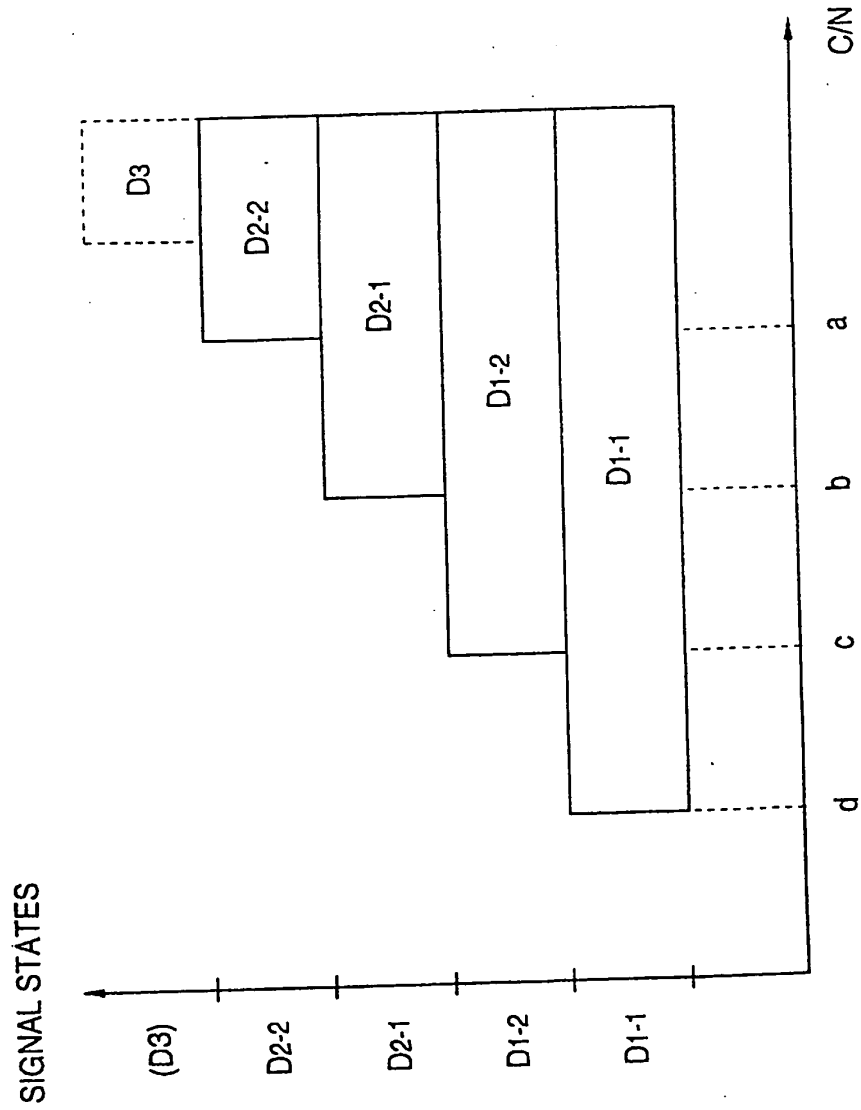


FIG. 86

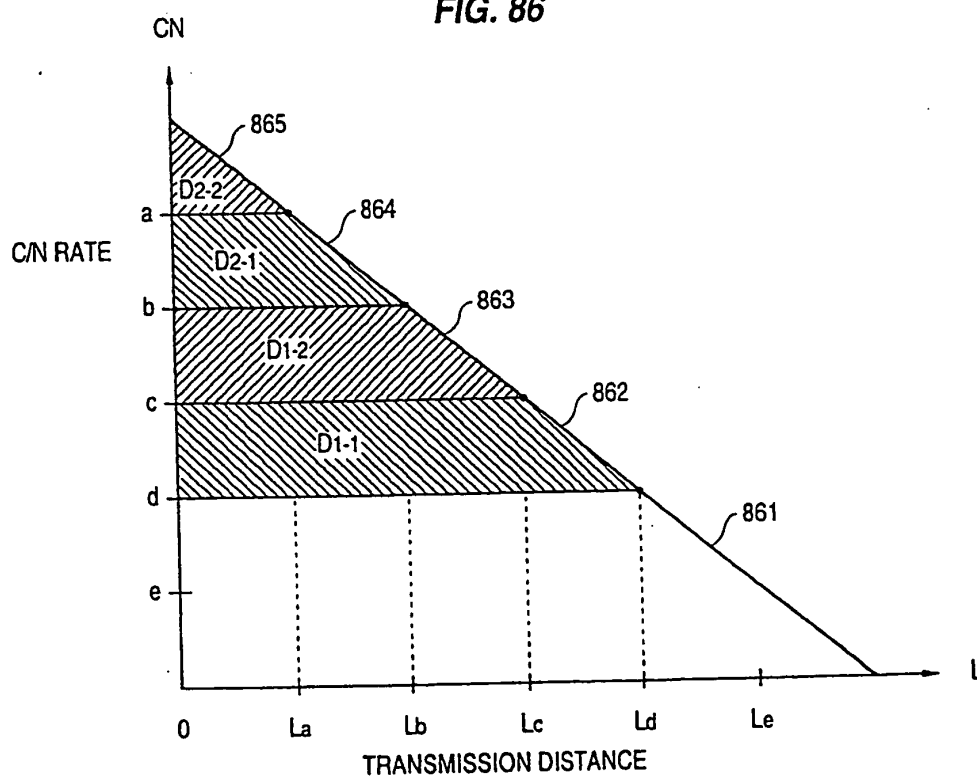


FIG. 87

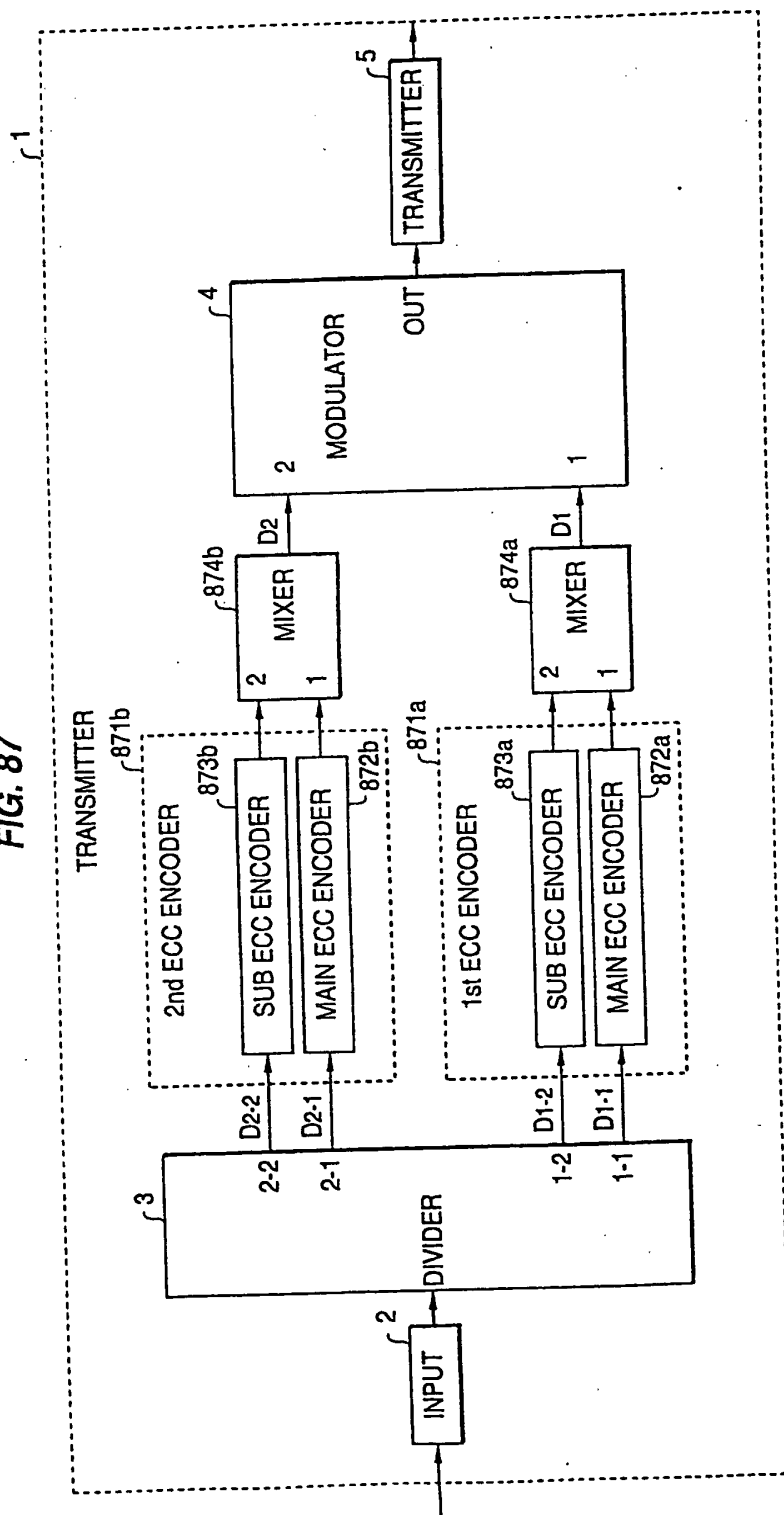


FIG. 88

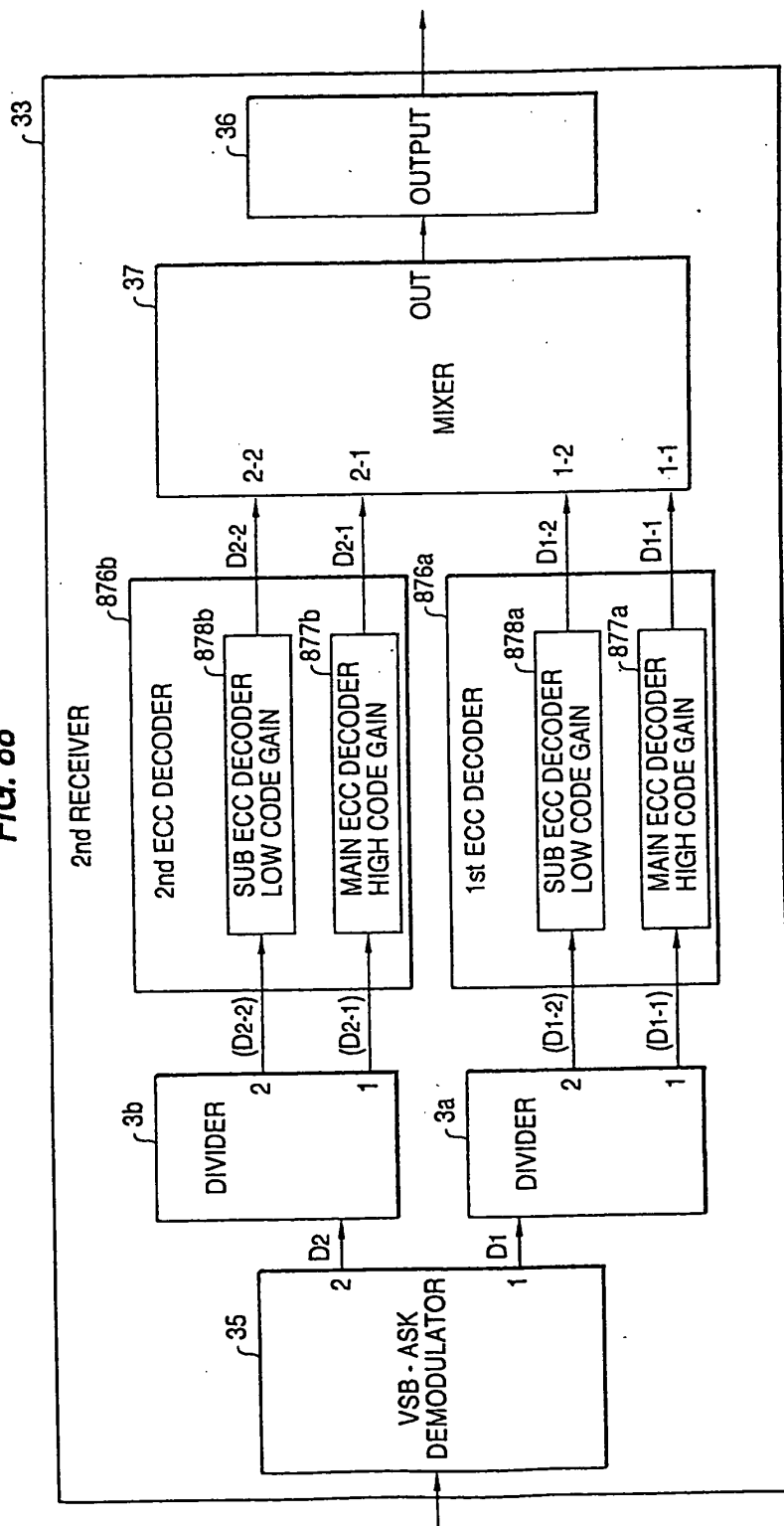




FIG. 89

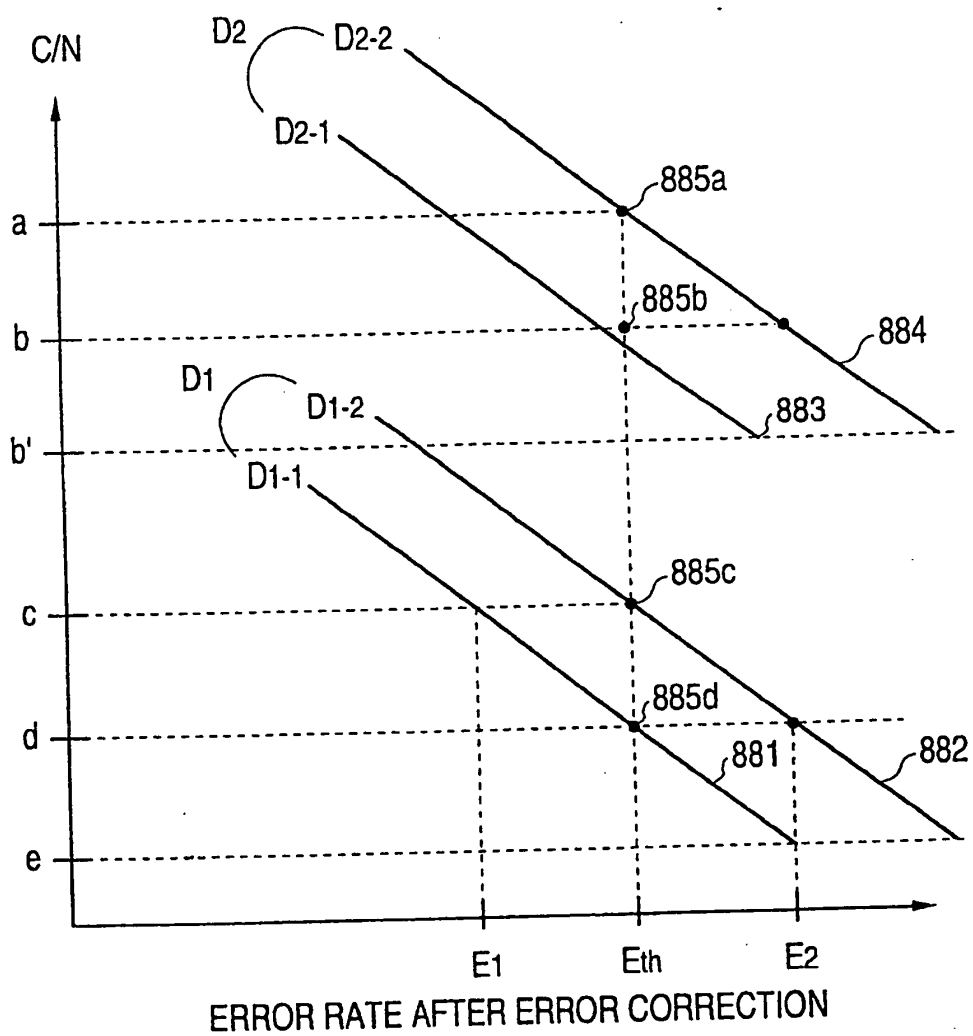


FIG. 90

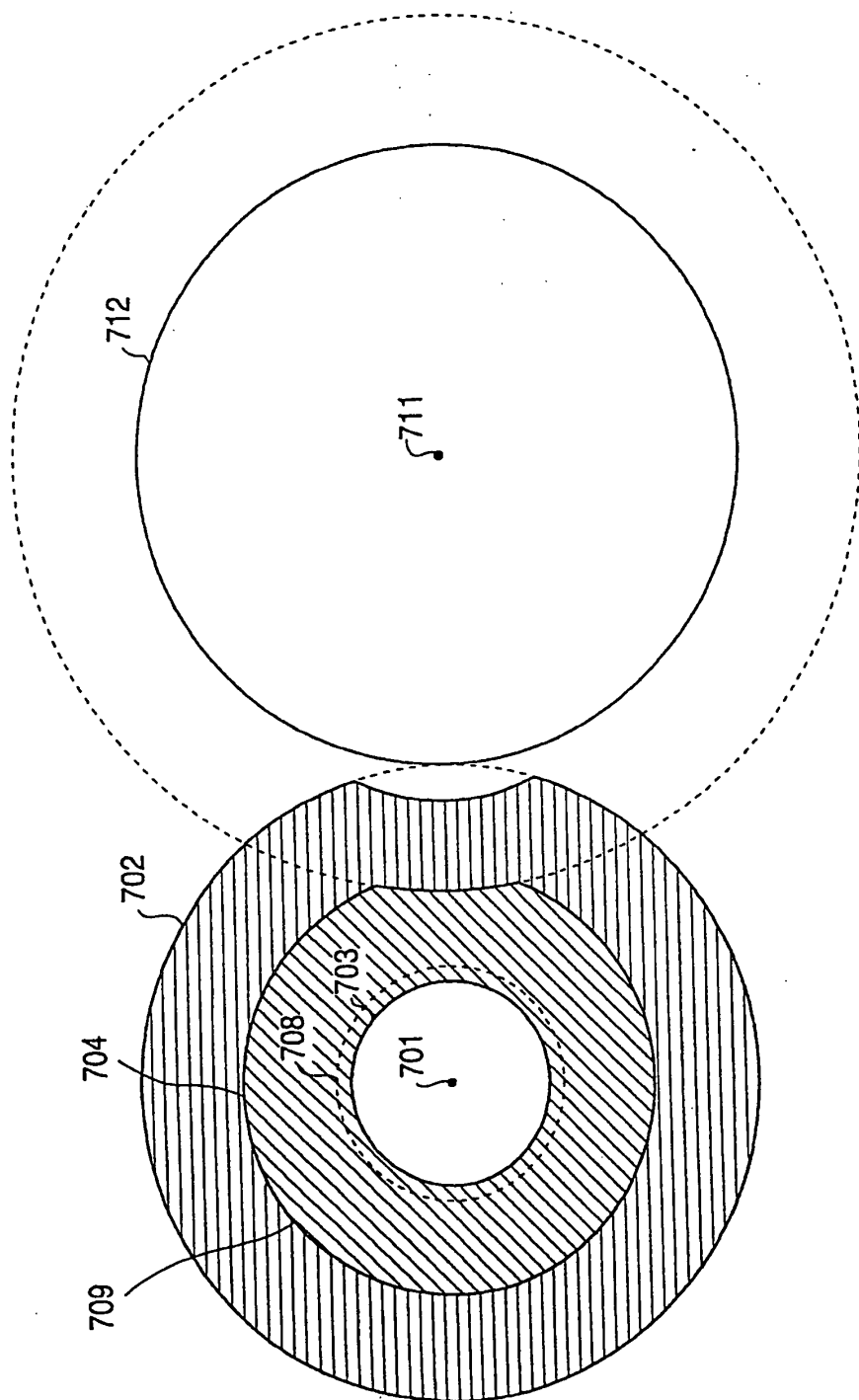


FIG. 91

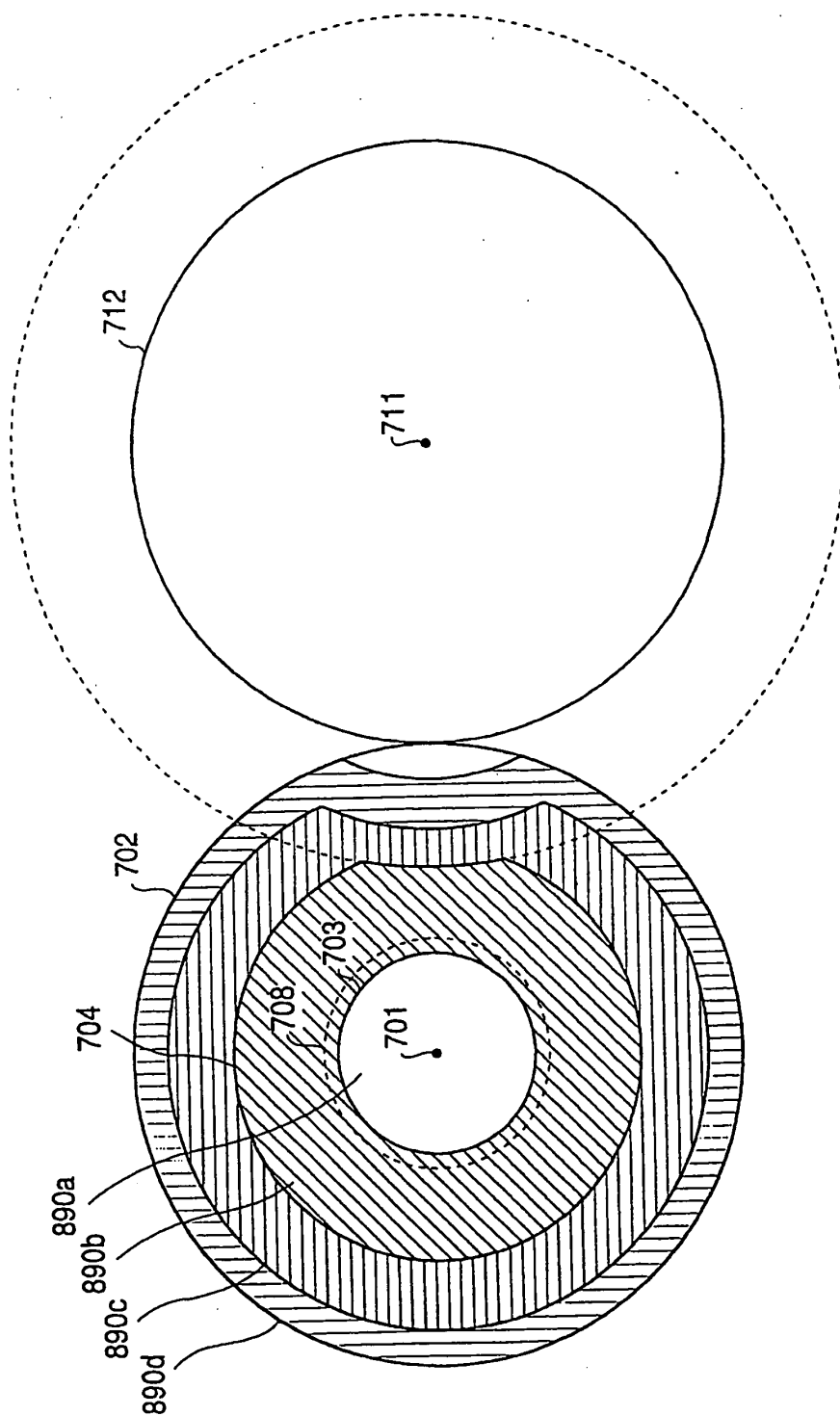


FIG. 92

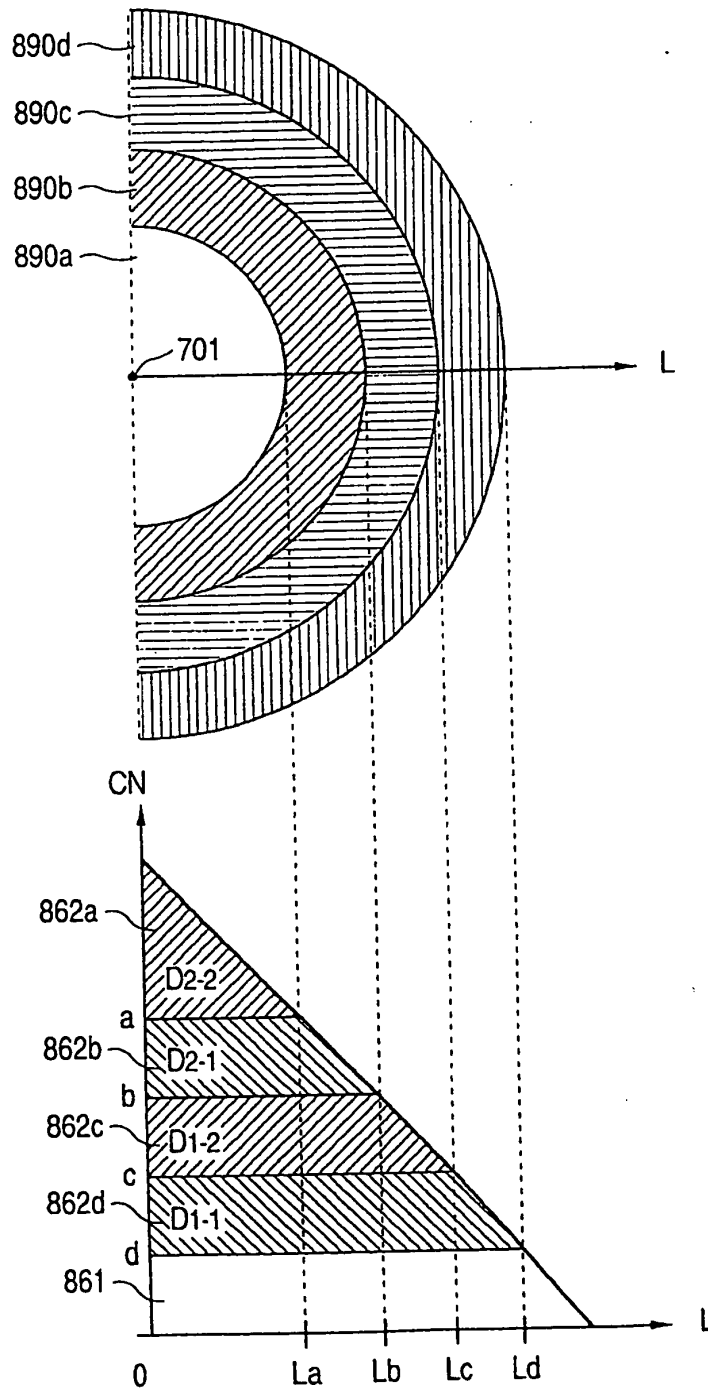


FIG. 93

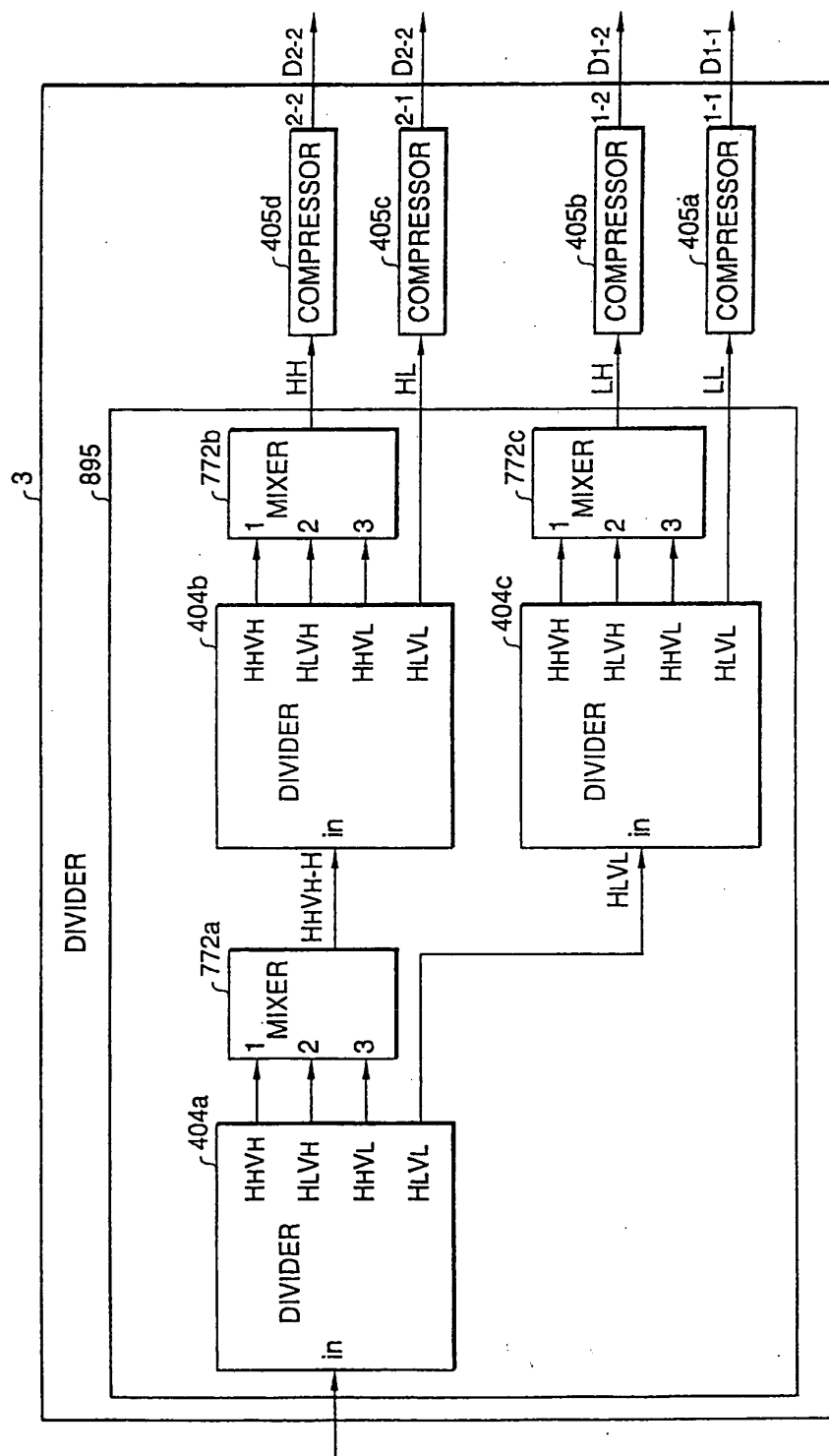


FIG. 94

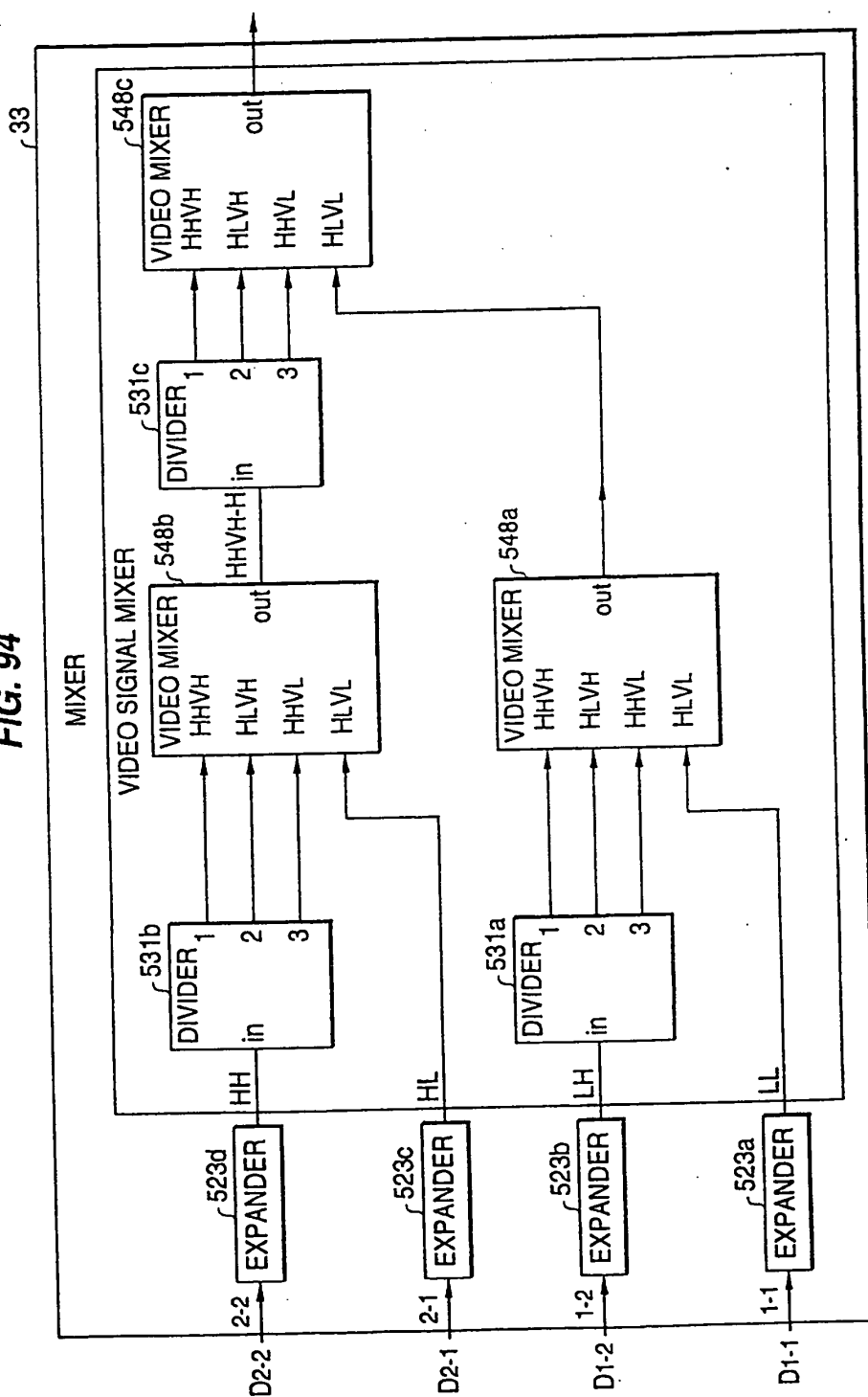


FIG. 95

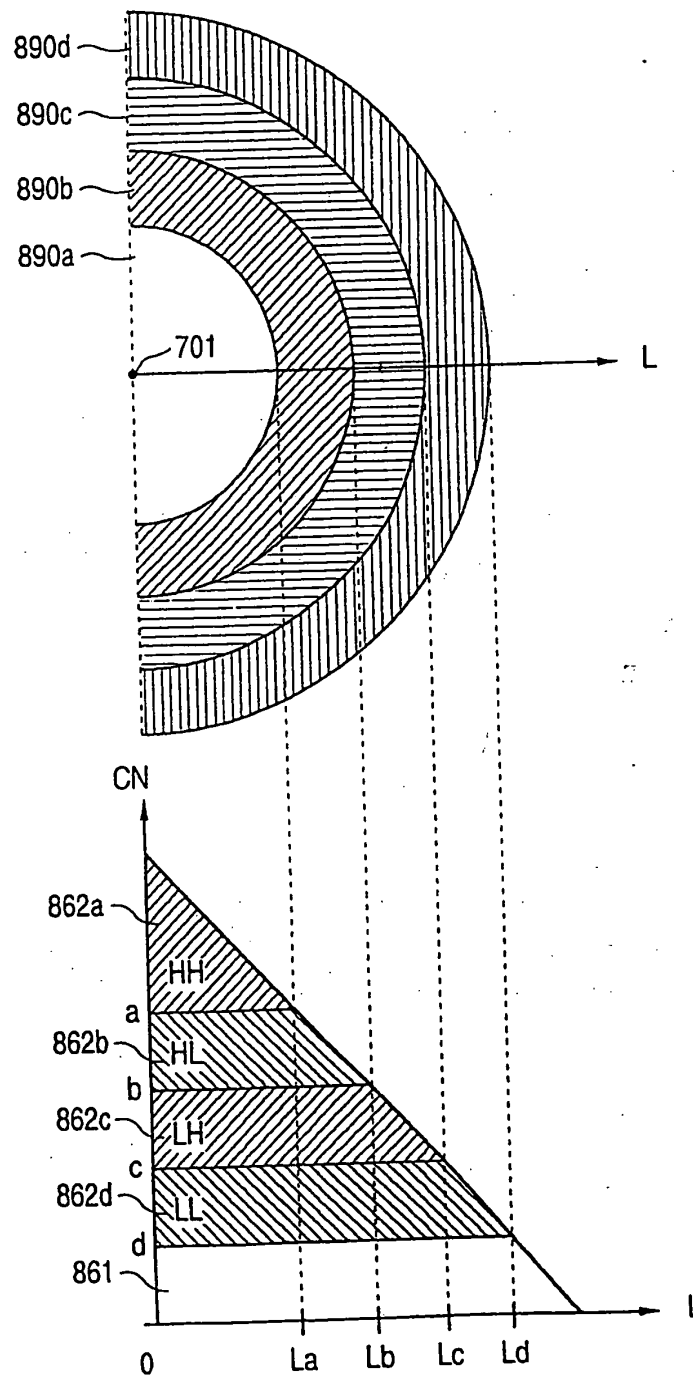


FIG. 96

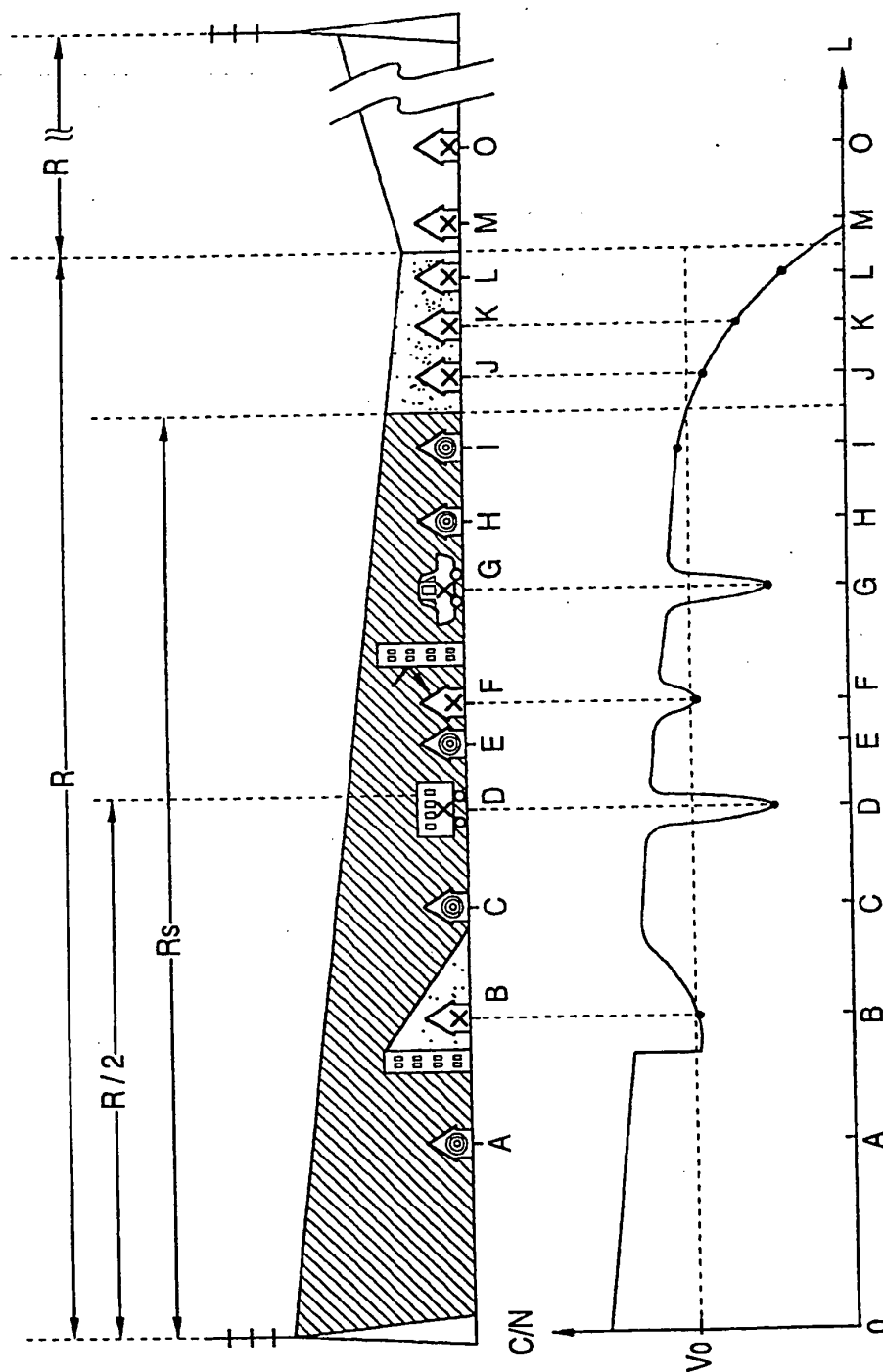




FIG. 97

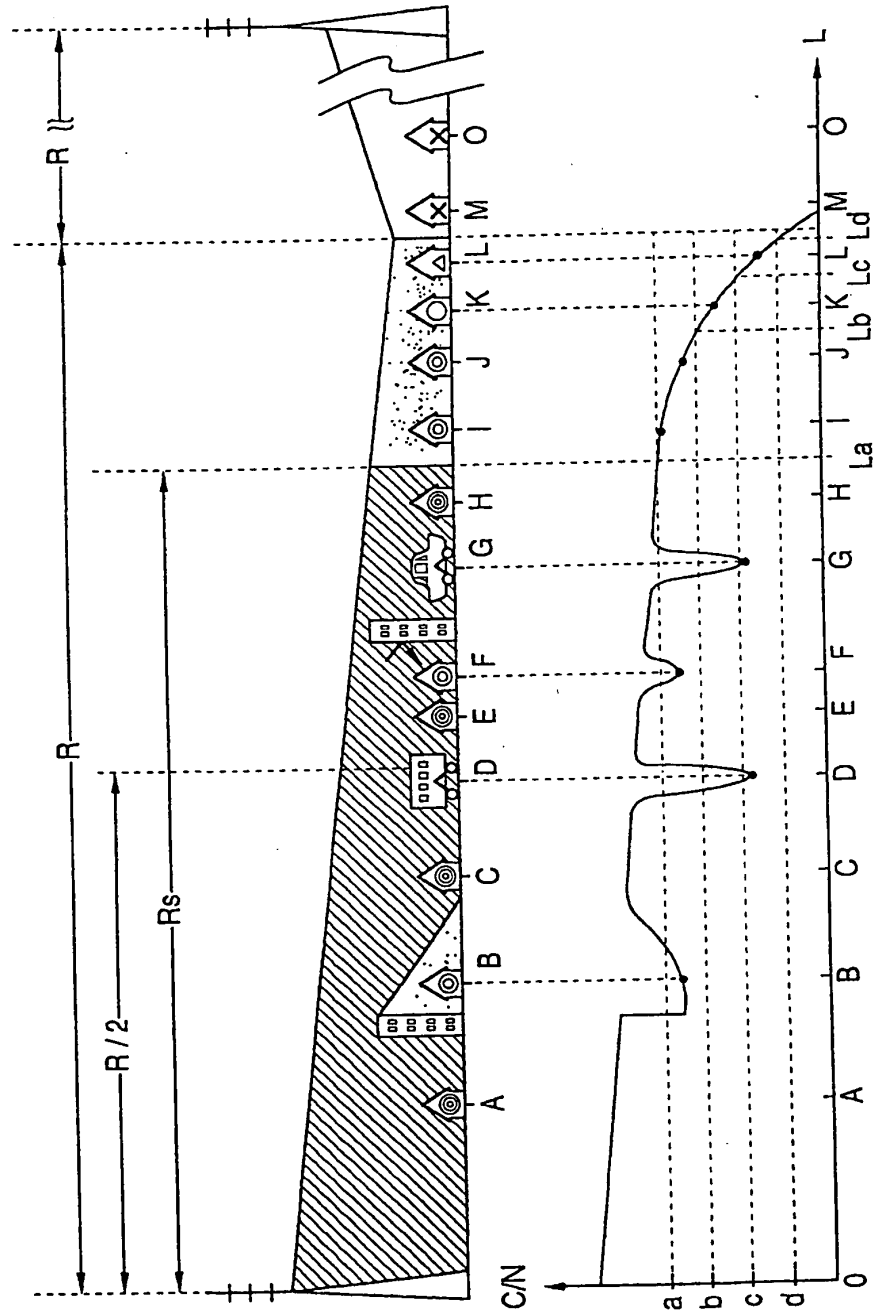


FIG. 98

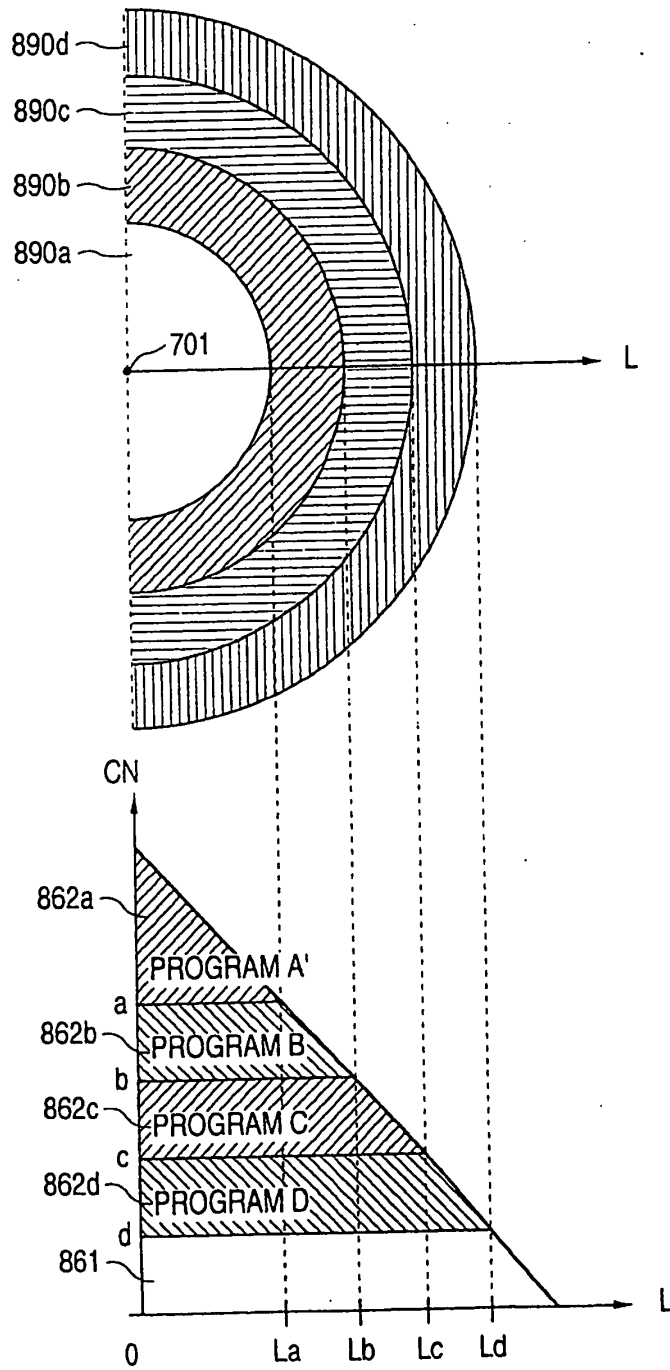


FIG. 99

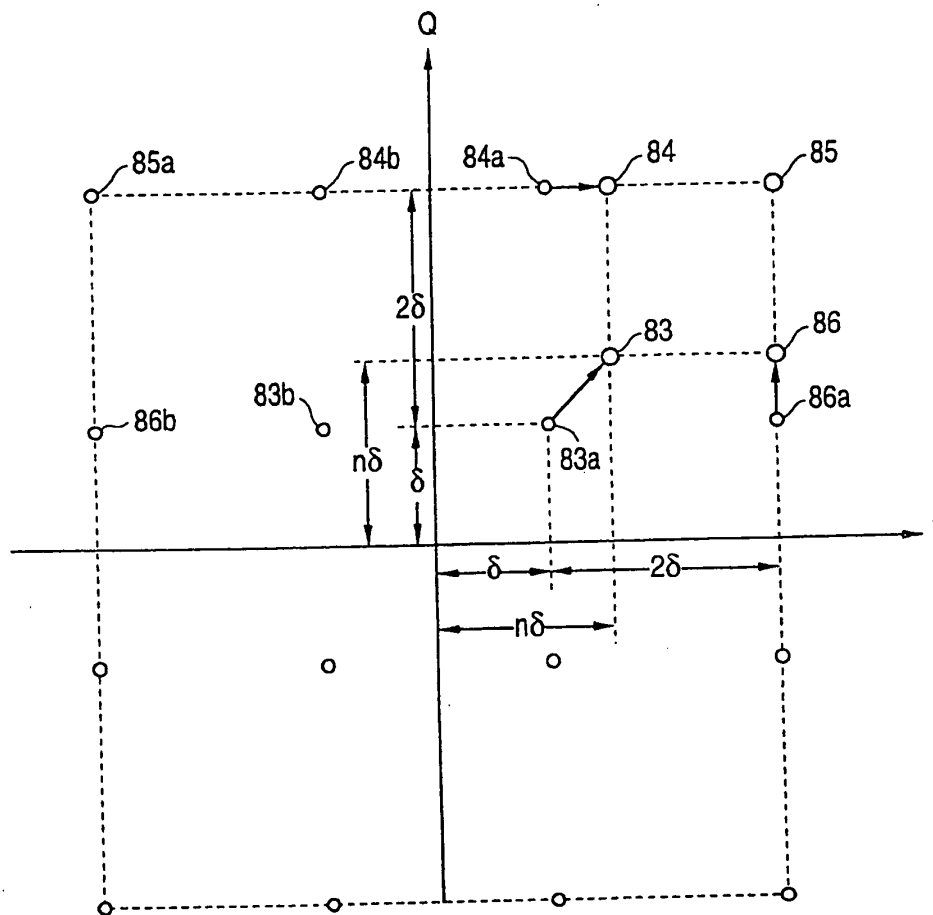


FIG. 100

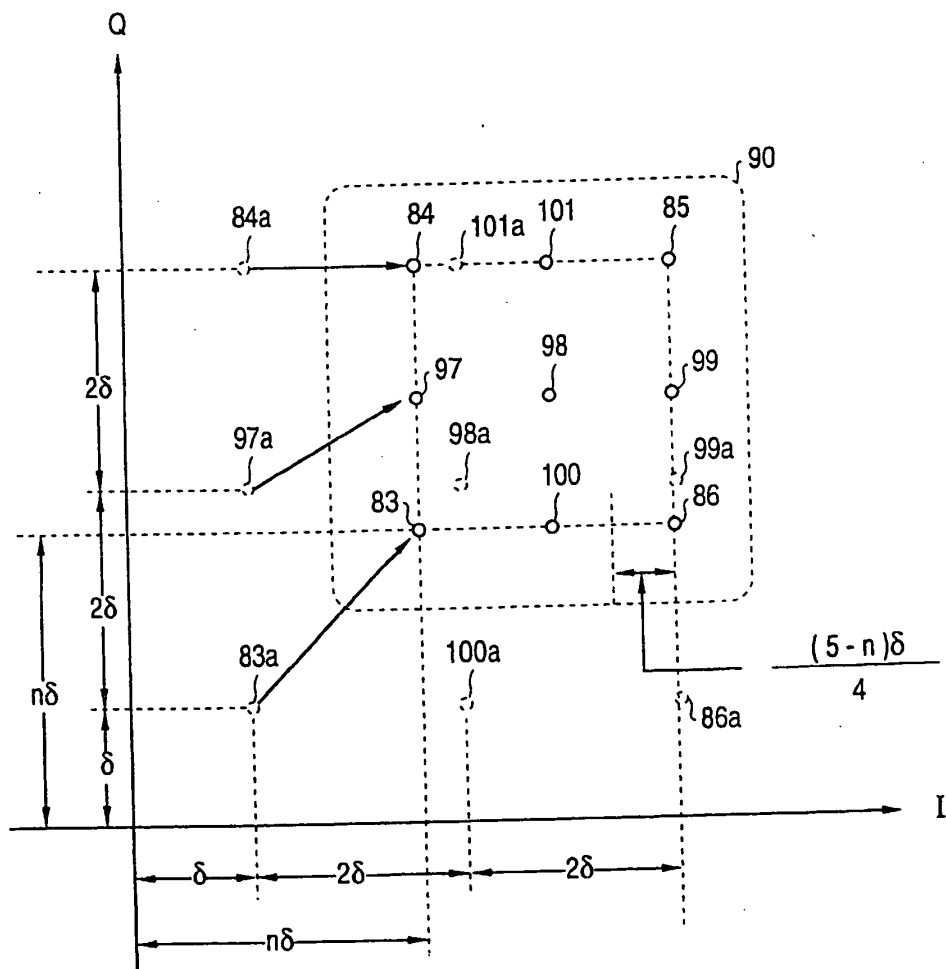


FIG. 101

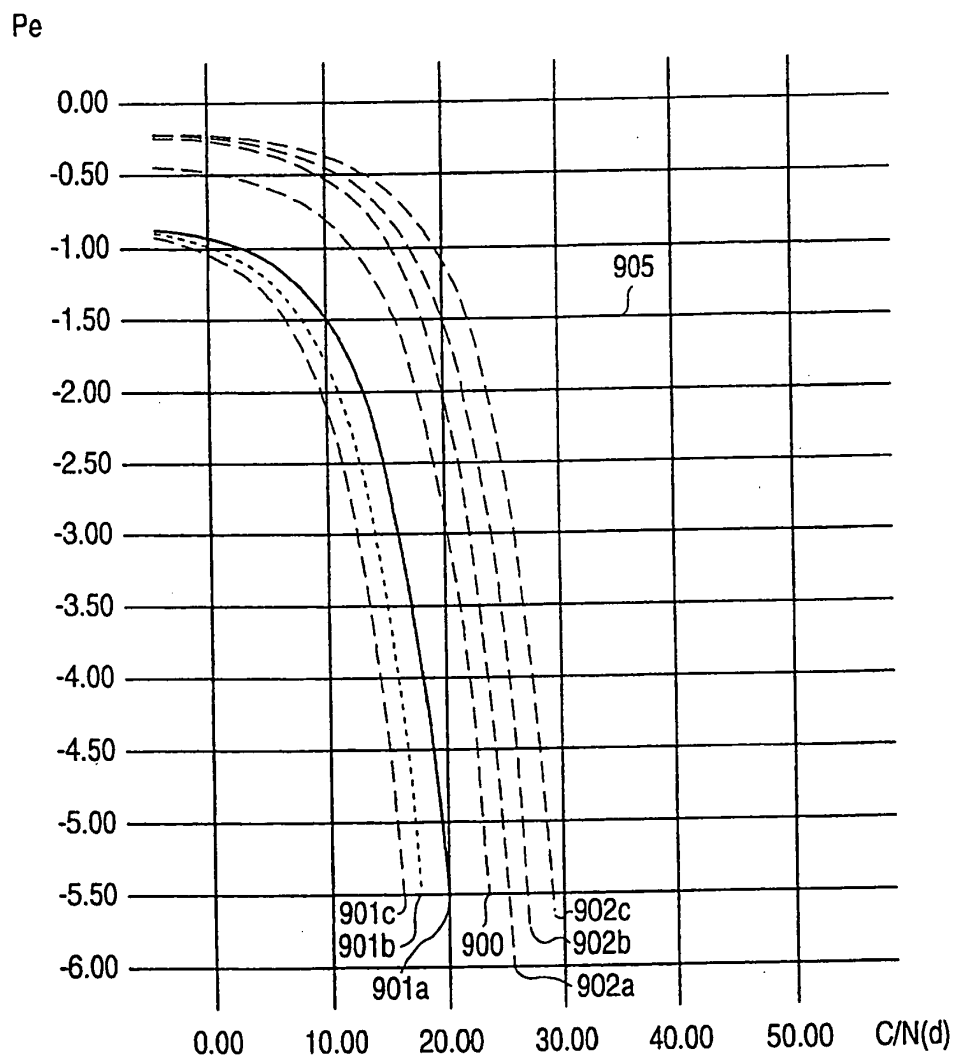


FIG. 102

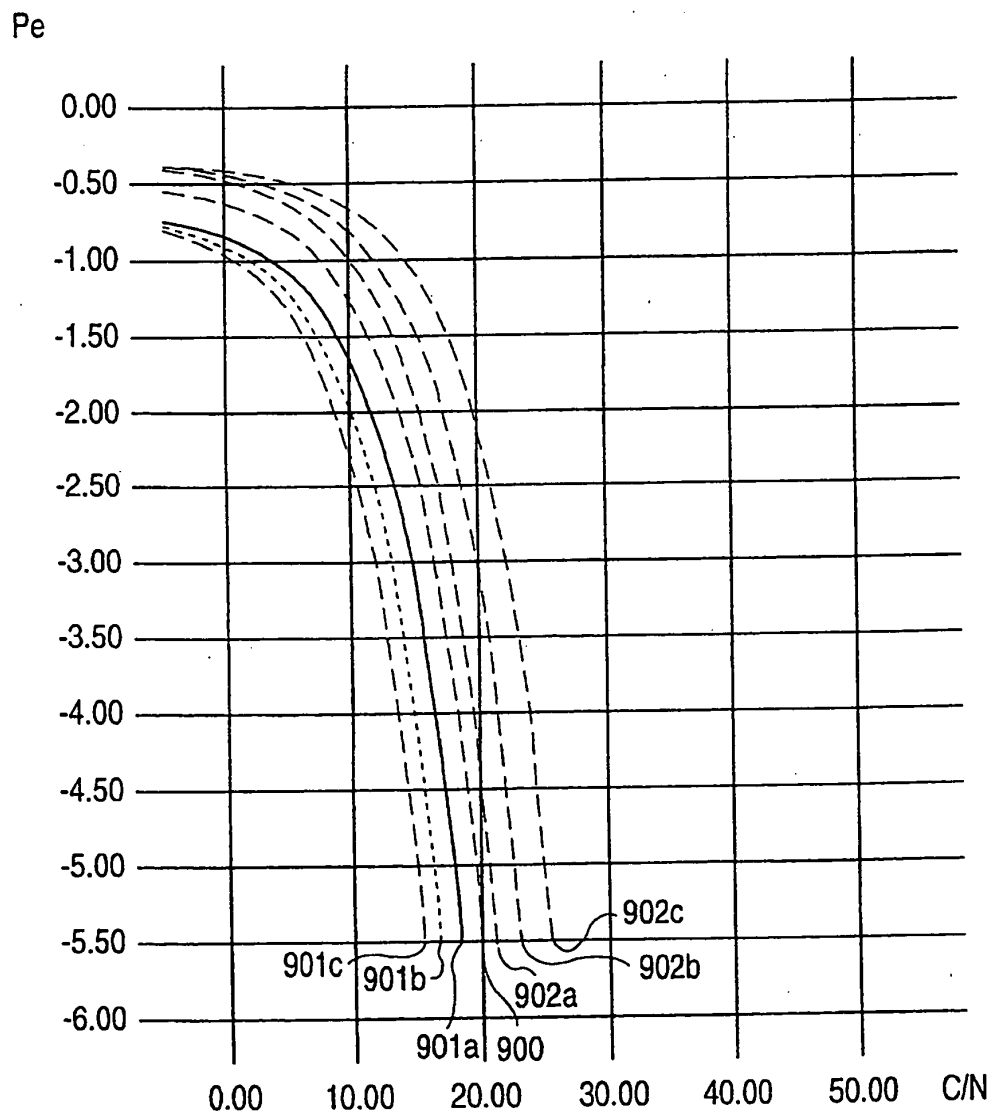


FIG. 103

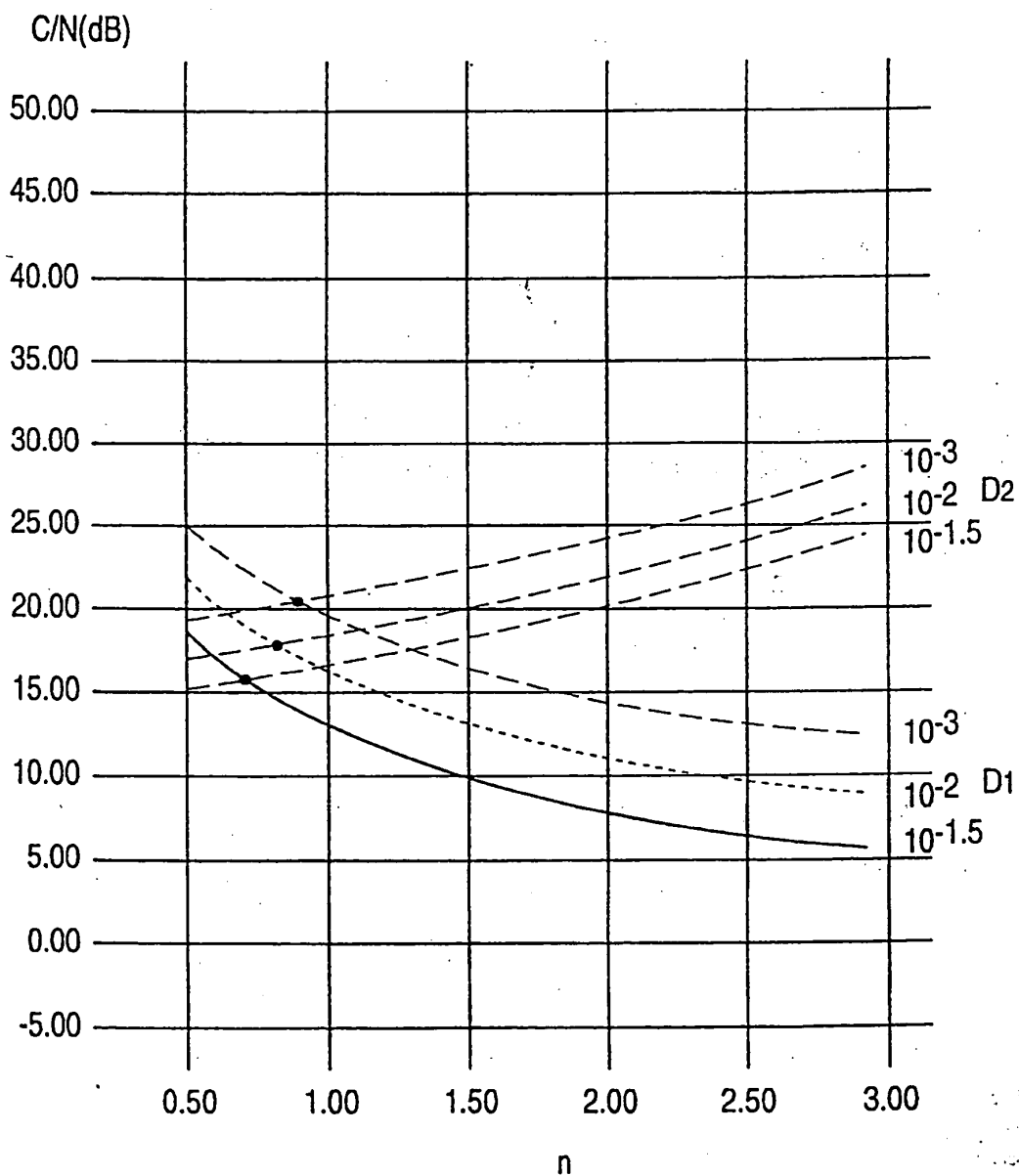


FIG. 104

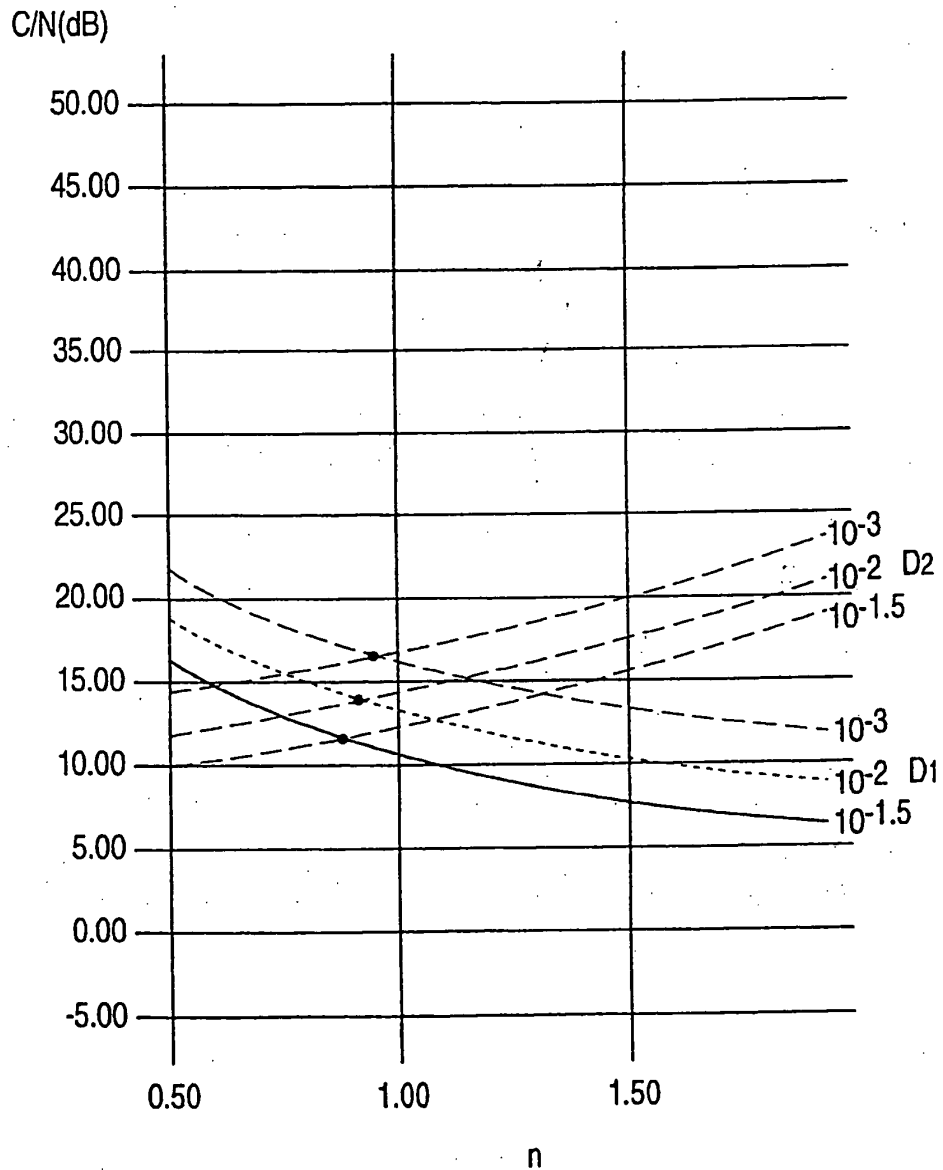




FIG. 105

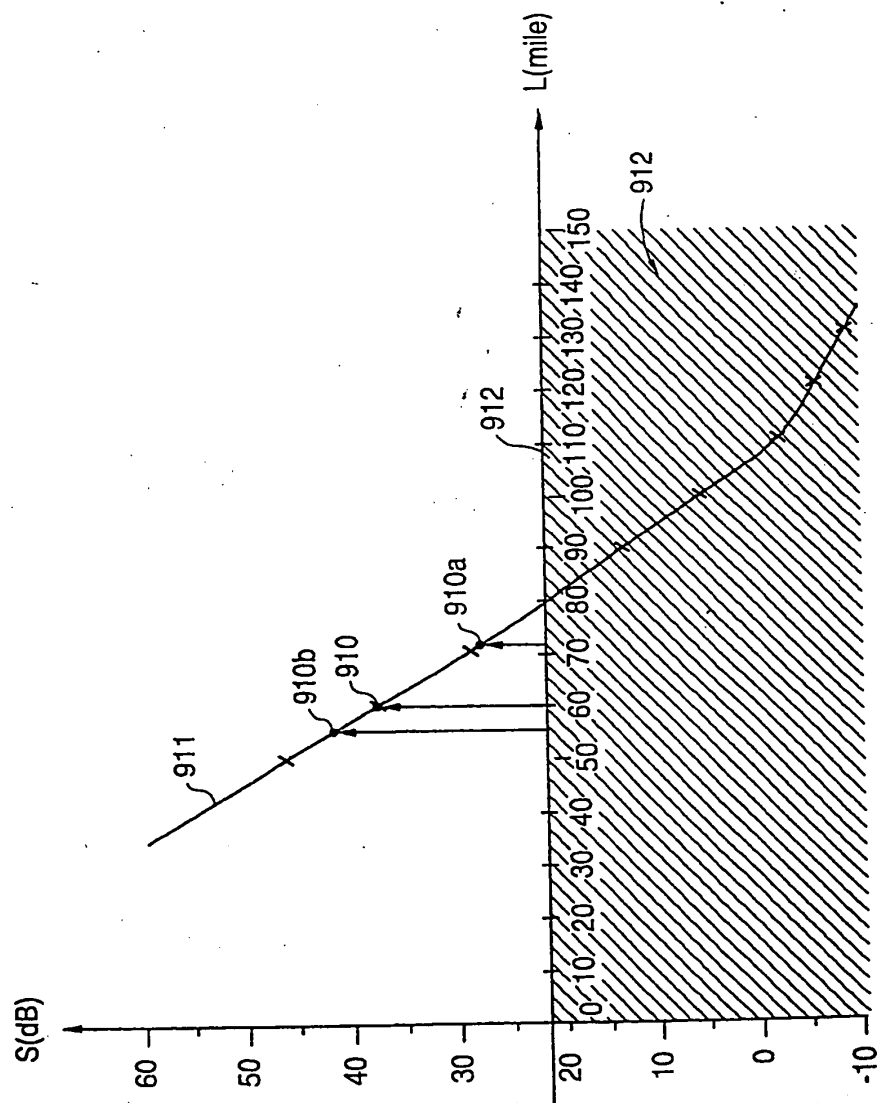


FIG. 106

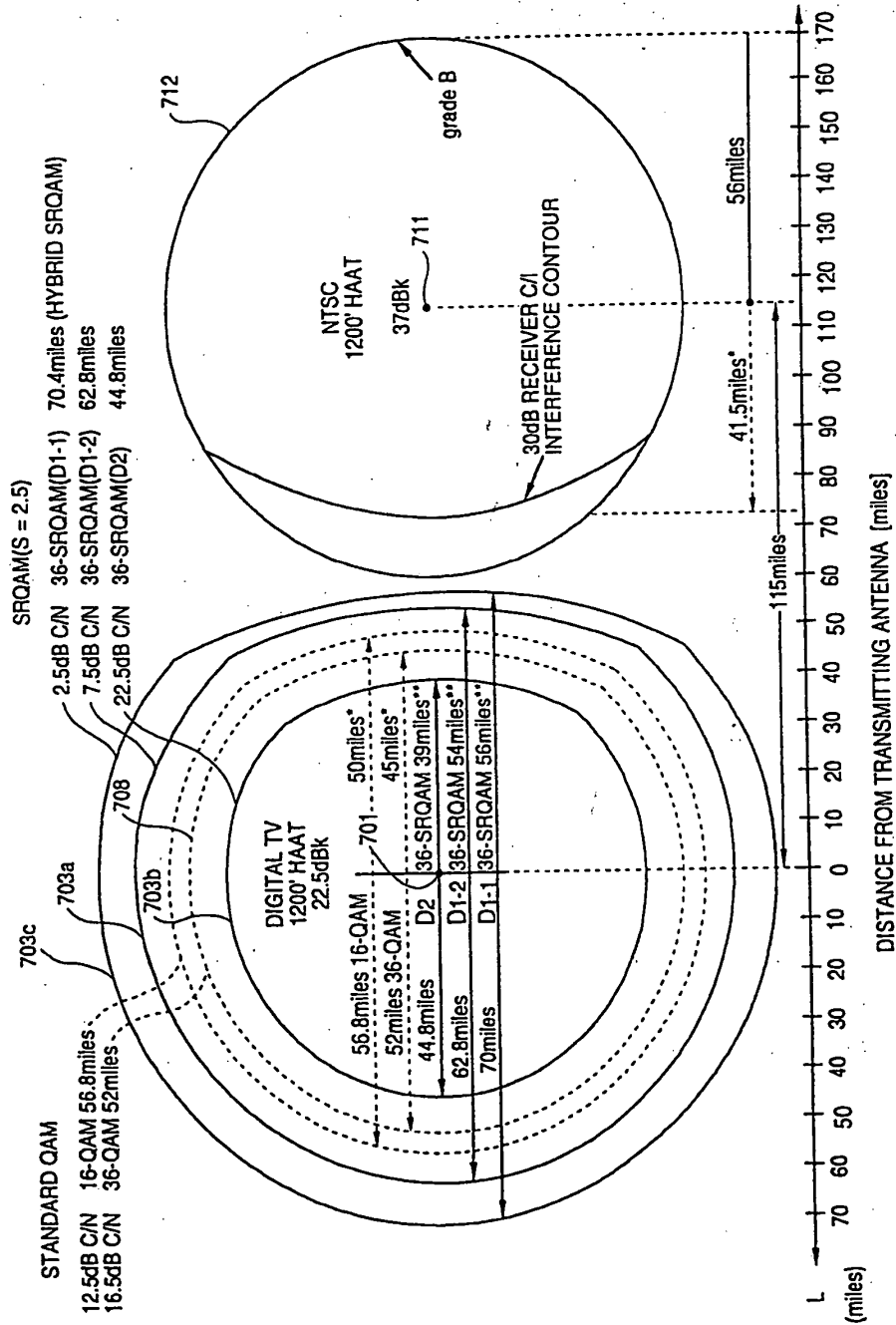


FIG. 107

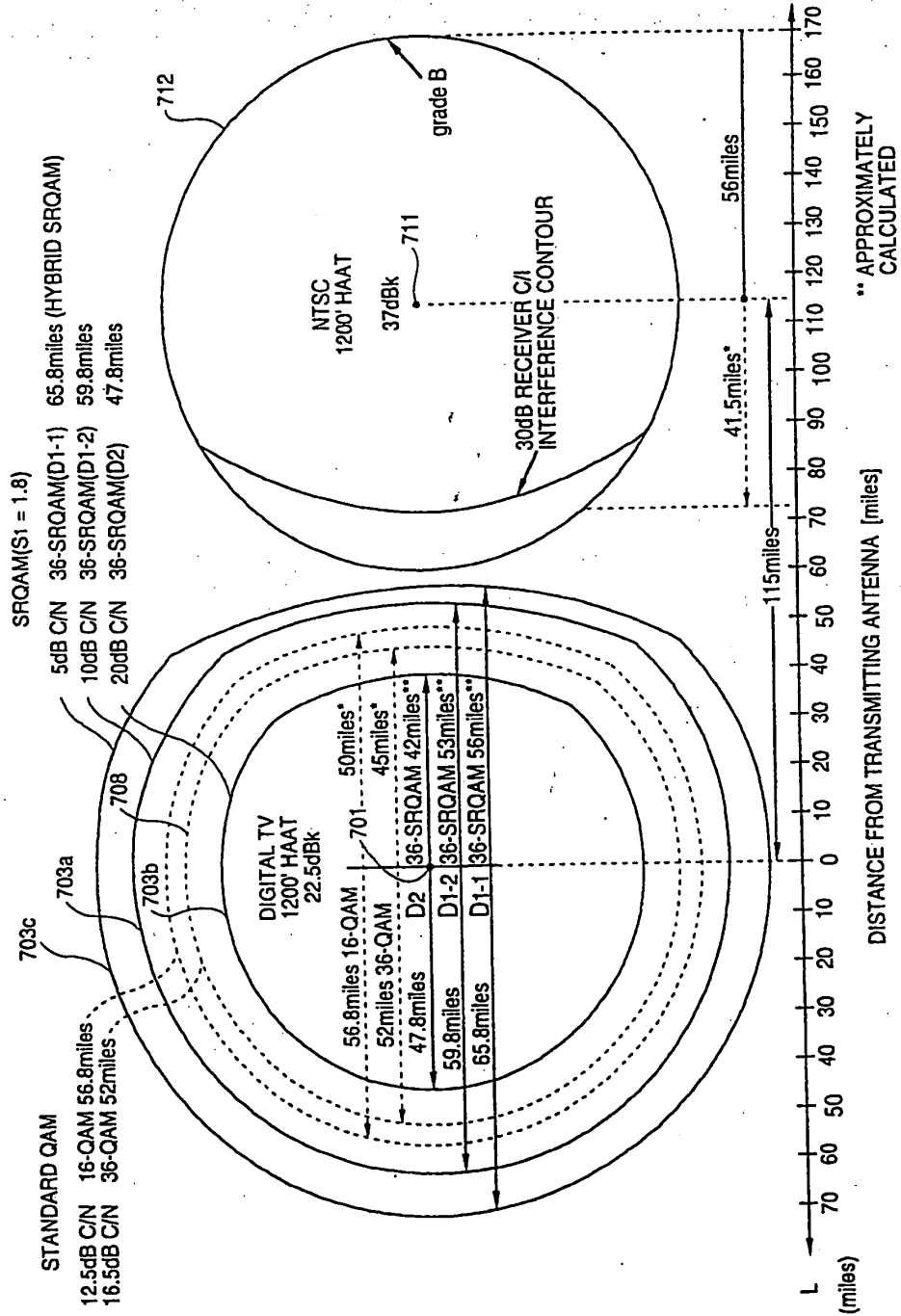


FIG. 108(a)

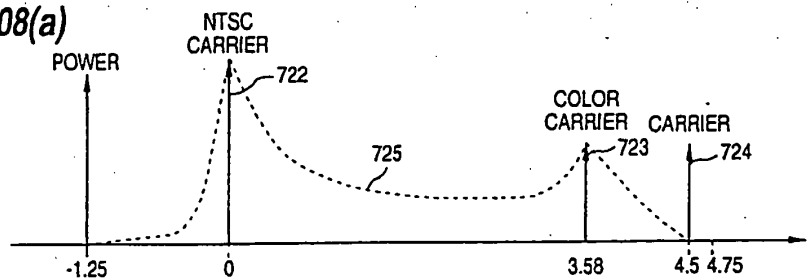


FIG. 108(b)

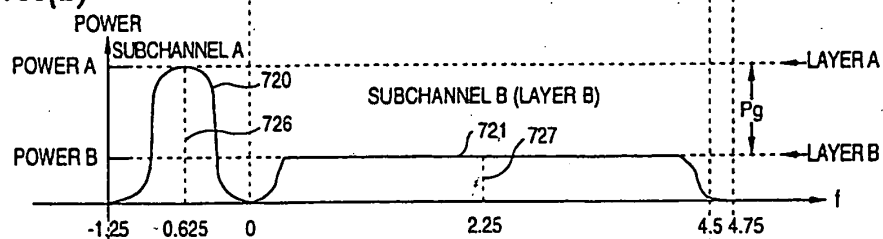


FIG. 108(c)

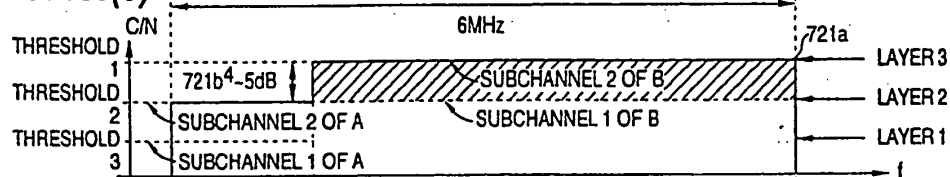


FIG. 108(d)

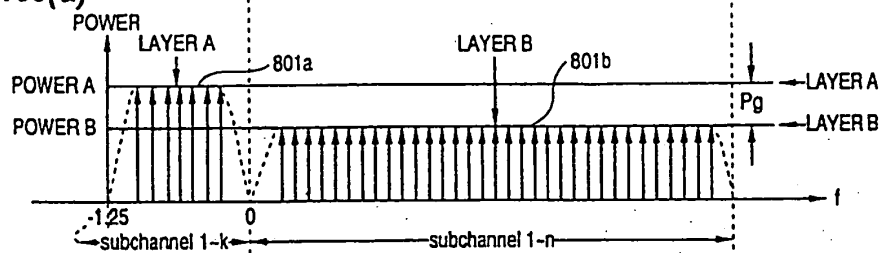


FIG. 108(e)

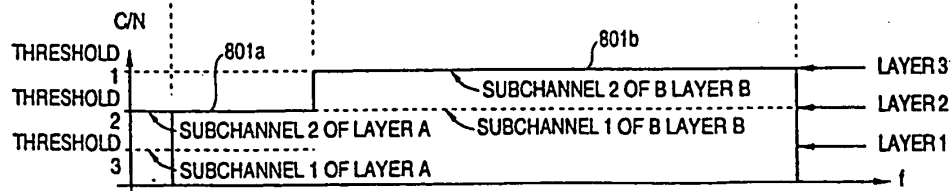


FIG. 109

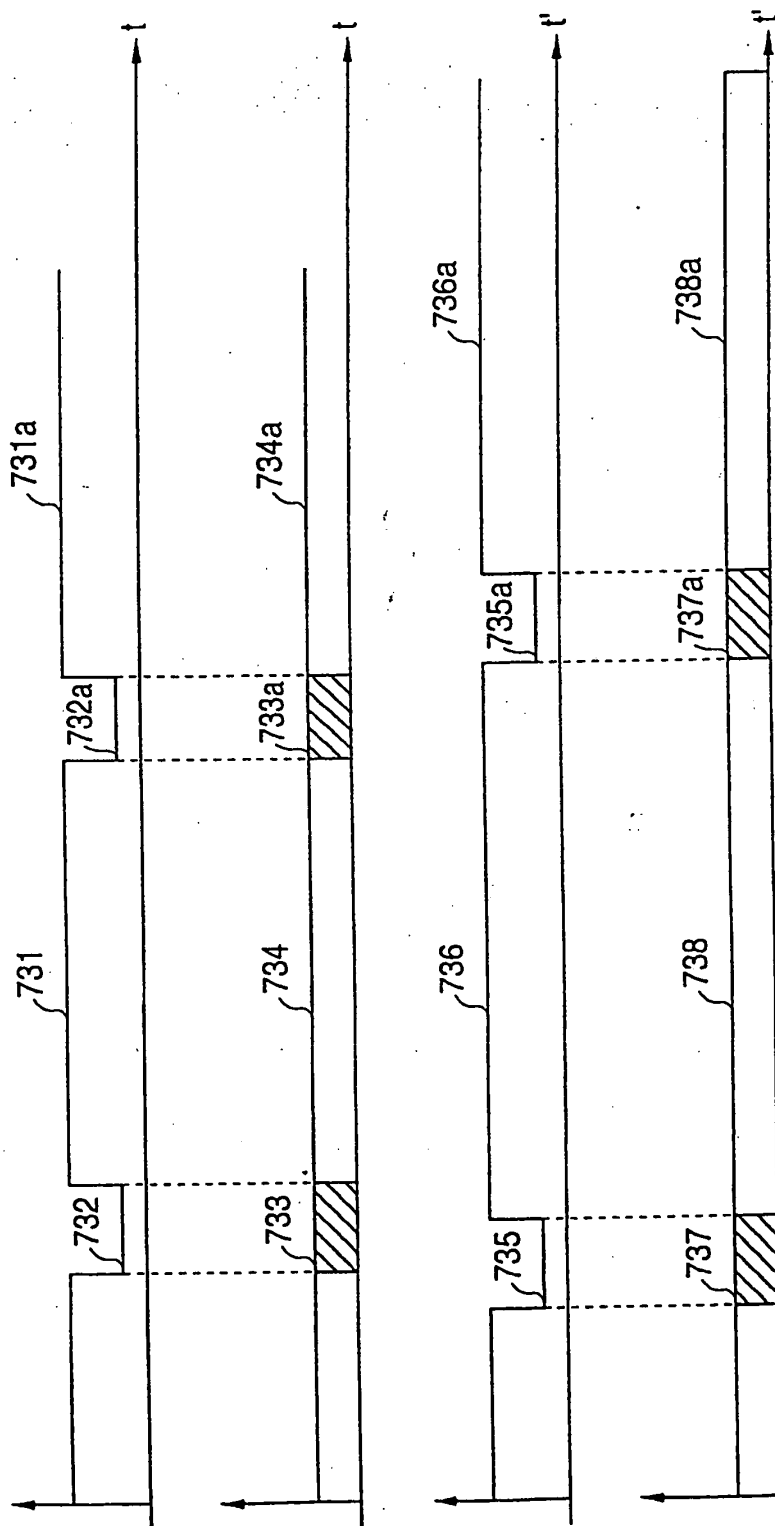
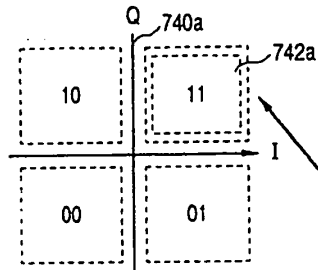




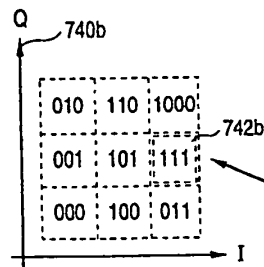
FIG. 111

SUBCHANNEL-1 (SRQAM:D1 = 2bit )



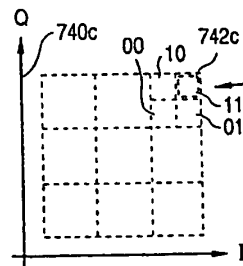
CODE WORD-1

SUBCHANNEL-2 (36-SRQAM:D2 = 3bit + 1/8bit )



CODE WORD-2

SUBCHANNEL-3 (144-SRQAM:D3 = 2bit )



CODE WORD-3

CODE WORD-4

SUBCHANNEL-4 (576-SRQAM:D4 = 2bit )

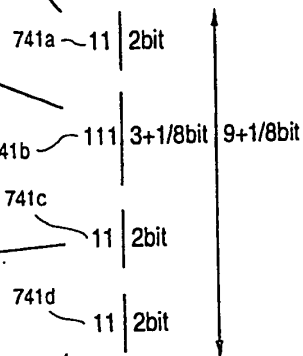
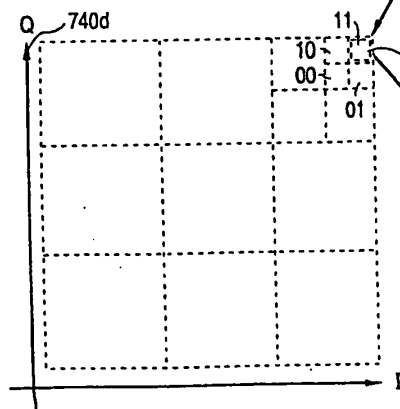
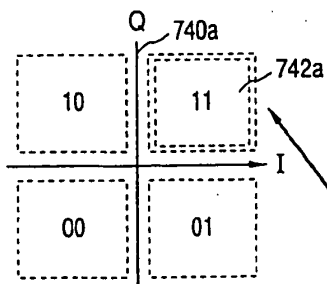
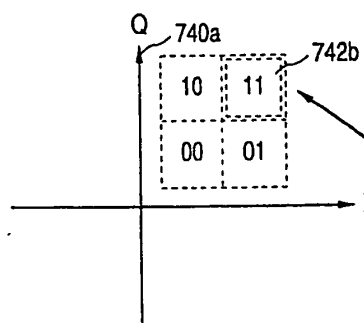


FIG. 112

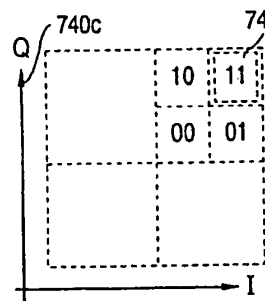
SUBCHANNEL-1 (SRQAM:D1 = 2bit)



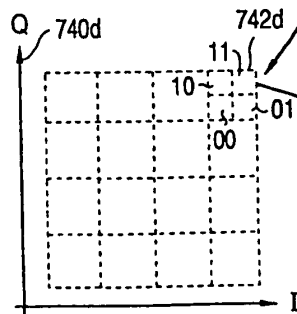
SUBCHANNEL-2 (16-SRQAM:D2 = 2bit)



SUBCHANNEL-3 (64-SRQAM:D3 = 2bit)



SUBCHANNEL-4 (256-SRQAM:D4 = 2bit)



CODE WORD-1

CODE WORD-2

CODE WORD-3

CODE WORD-4

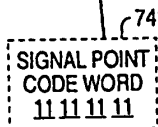
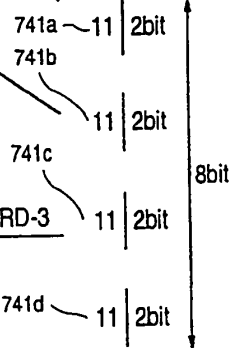




FIG. 113

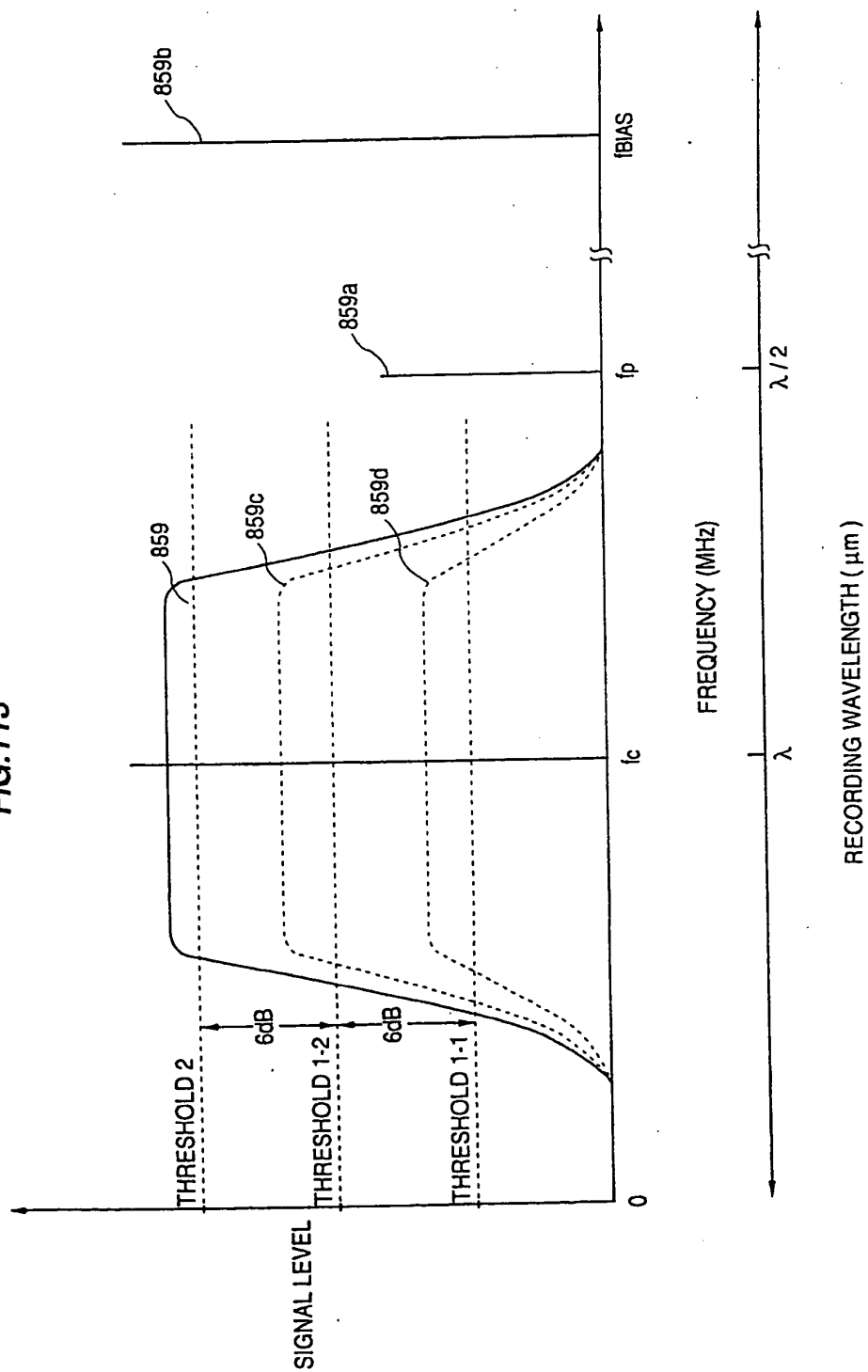


FIG. 114

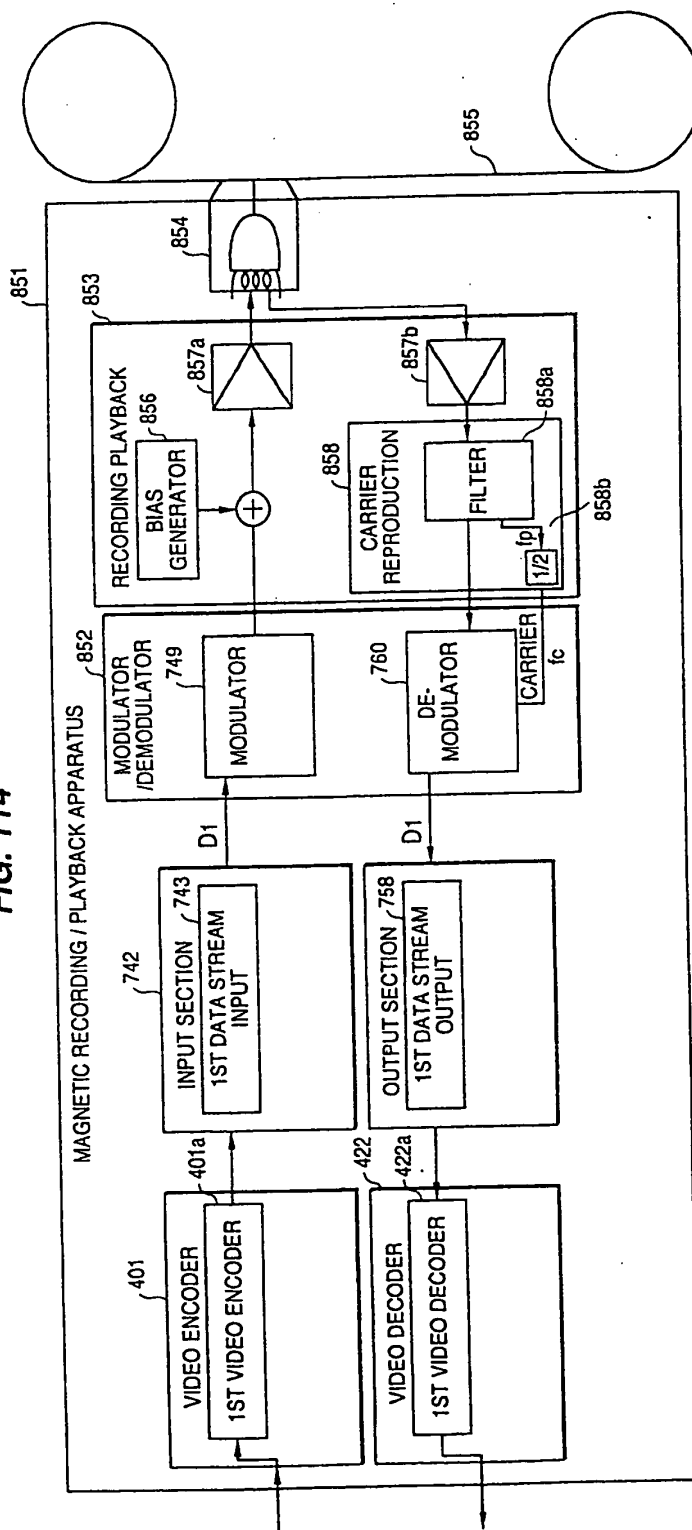


FIG. 115

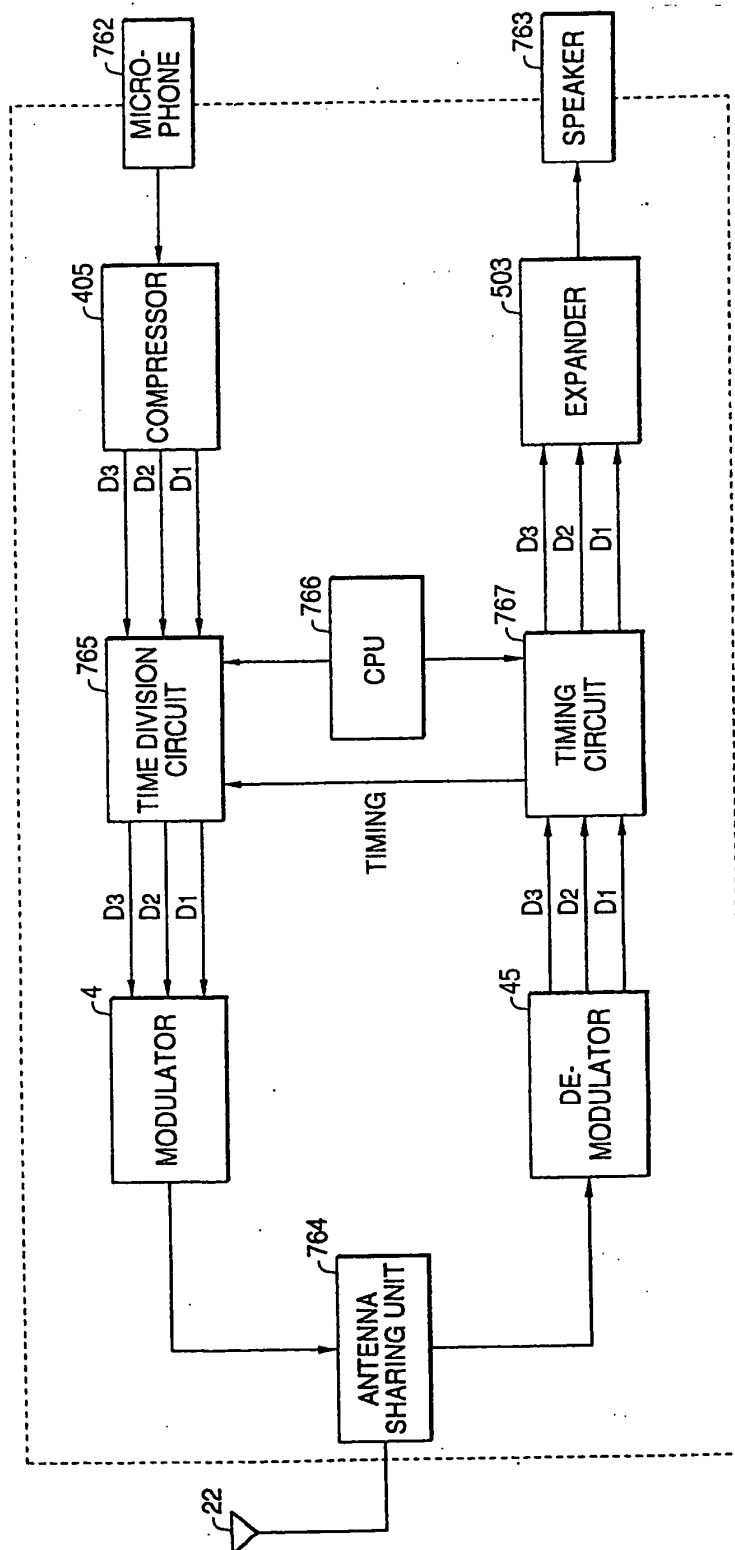


FIG. 116

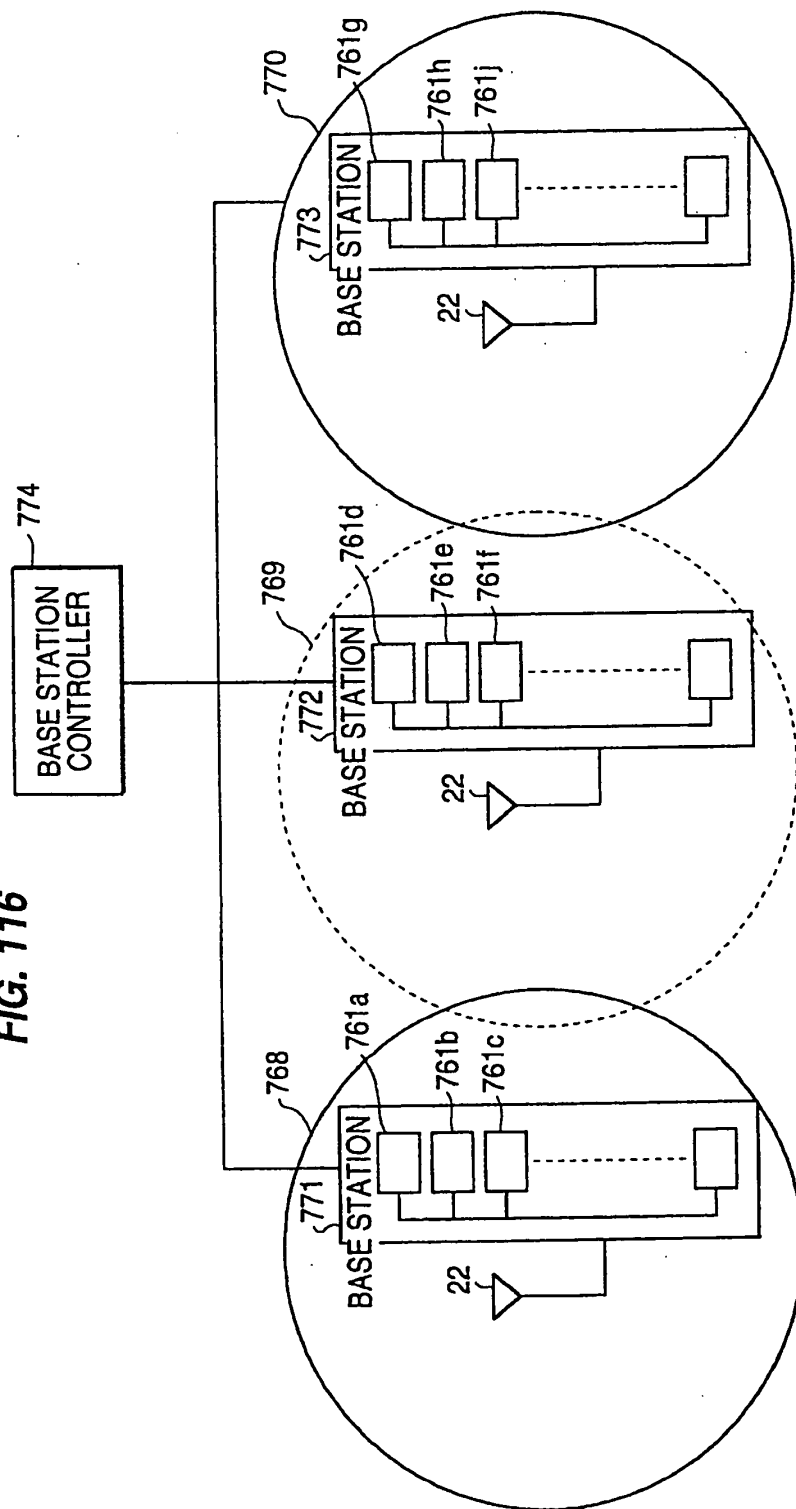


FIG. 117

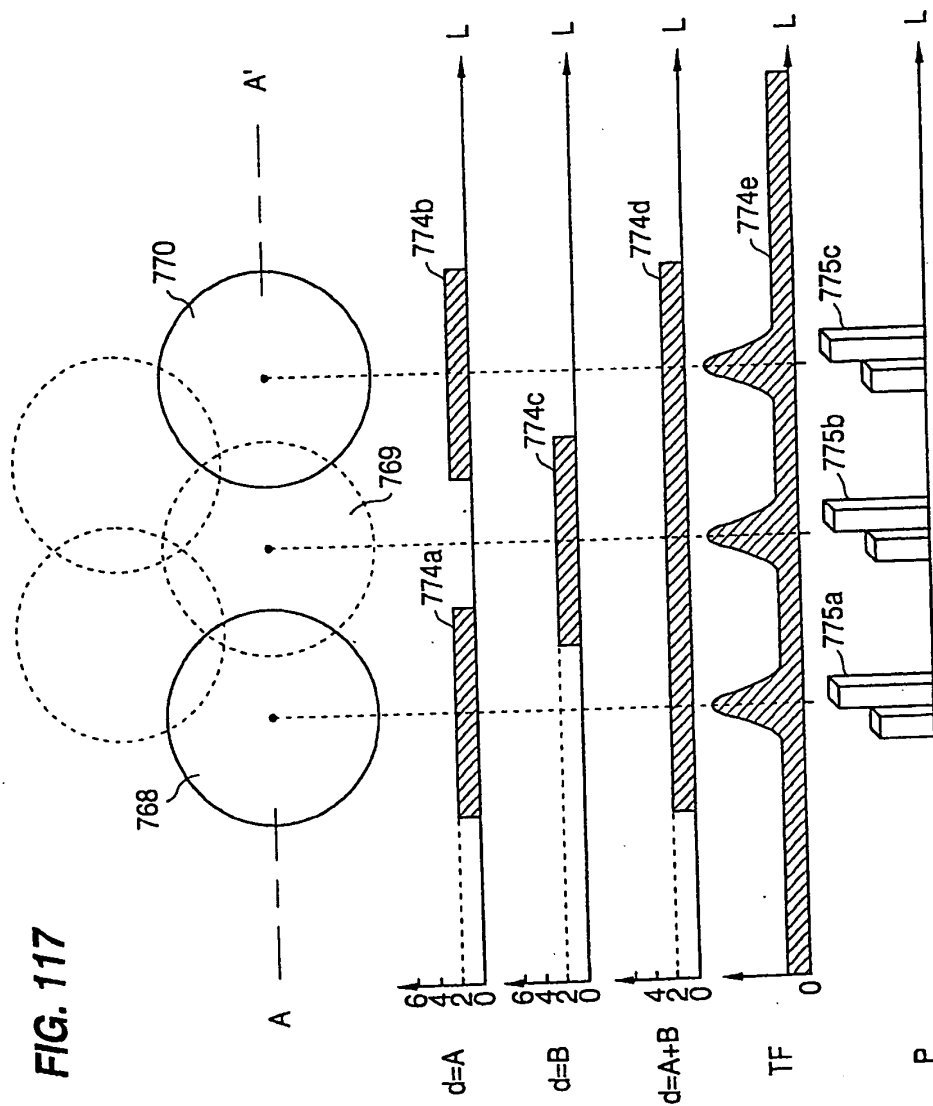
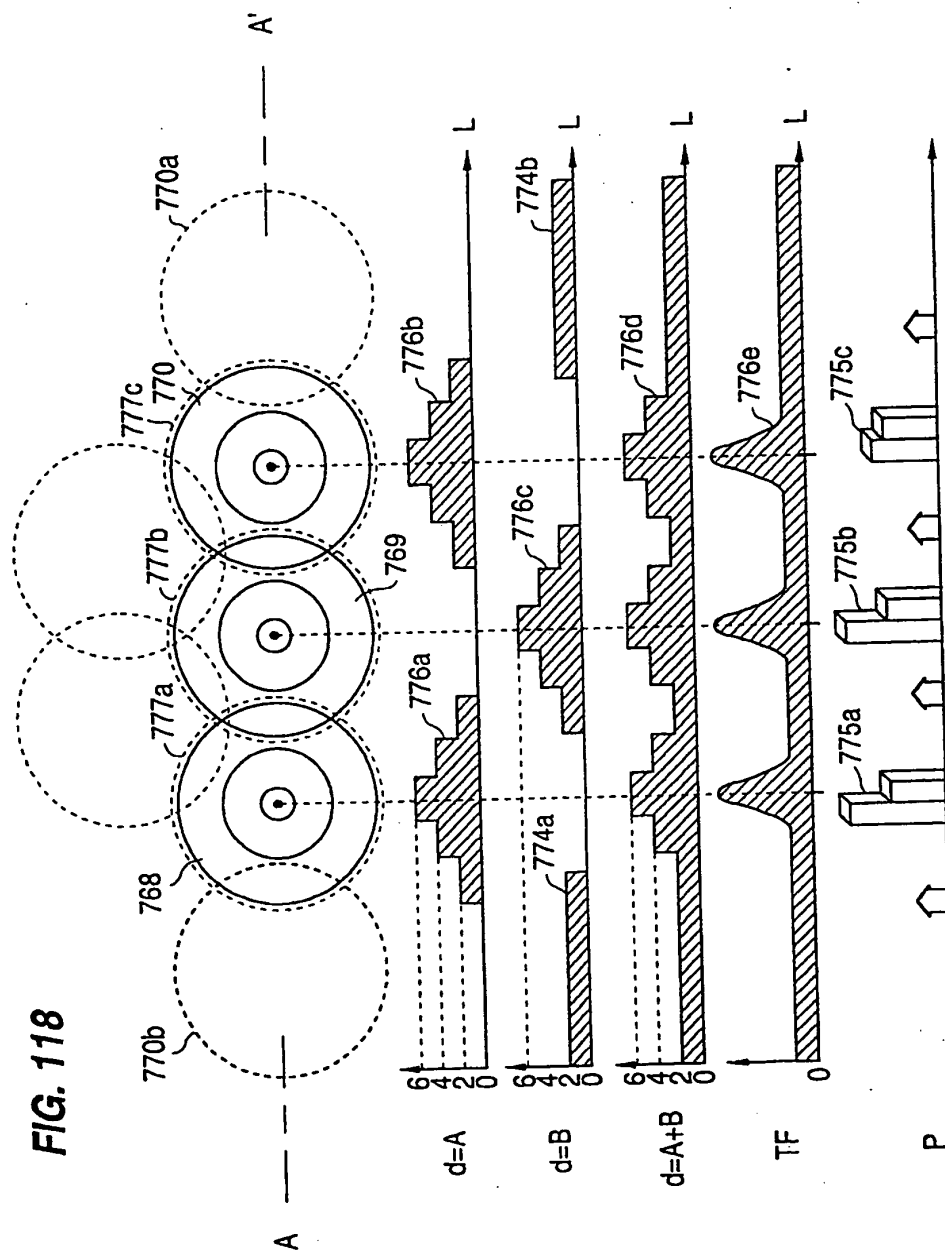
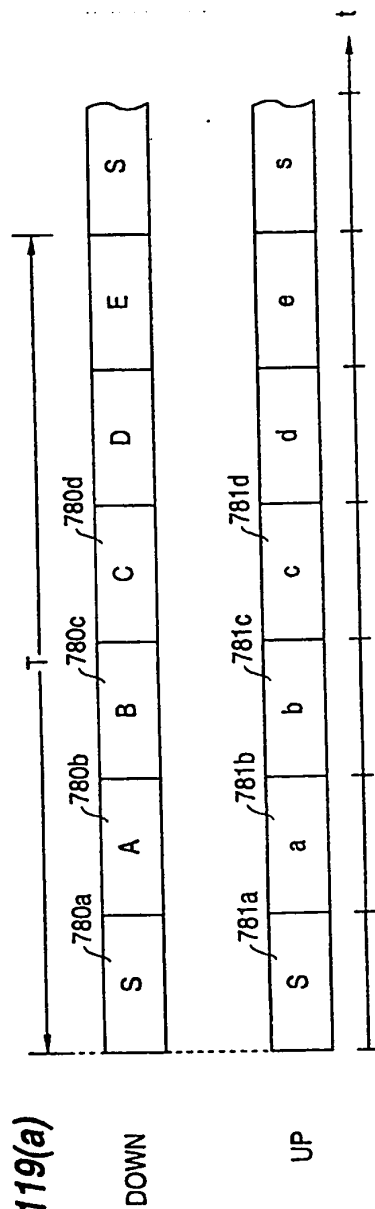


FIG. 118



**FIG. 119(a)**



**FIG. 119(b)**

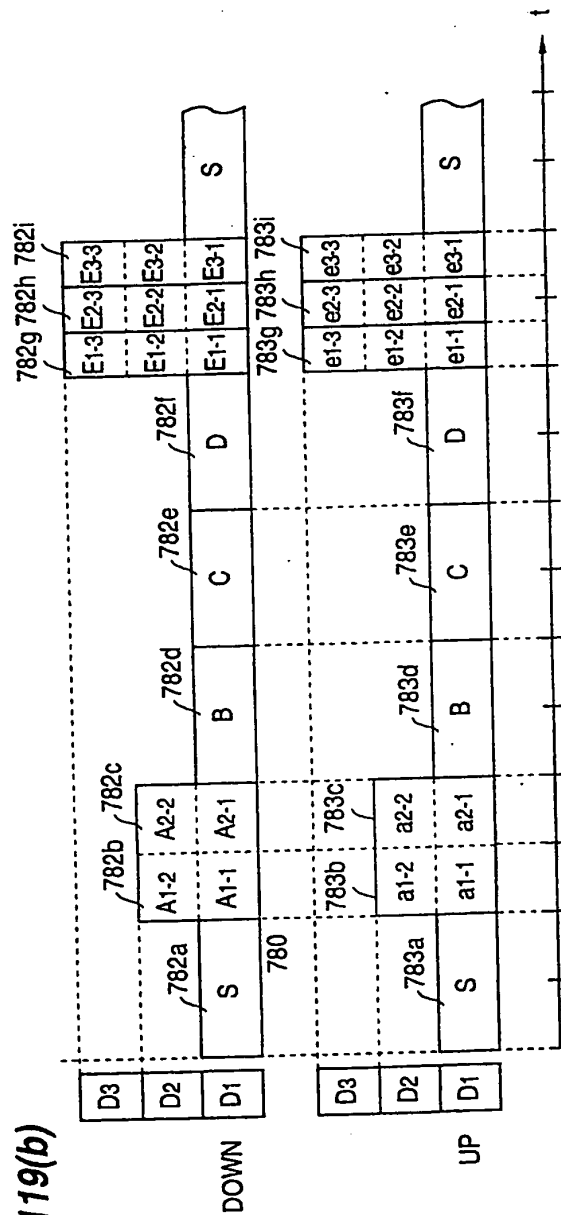






FIG. 121

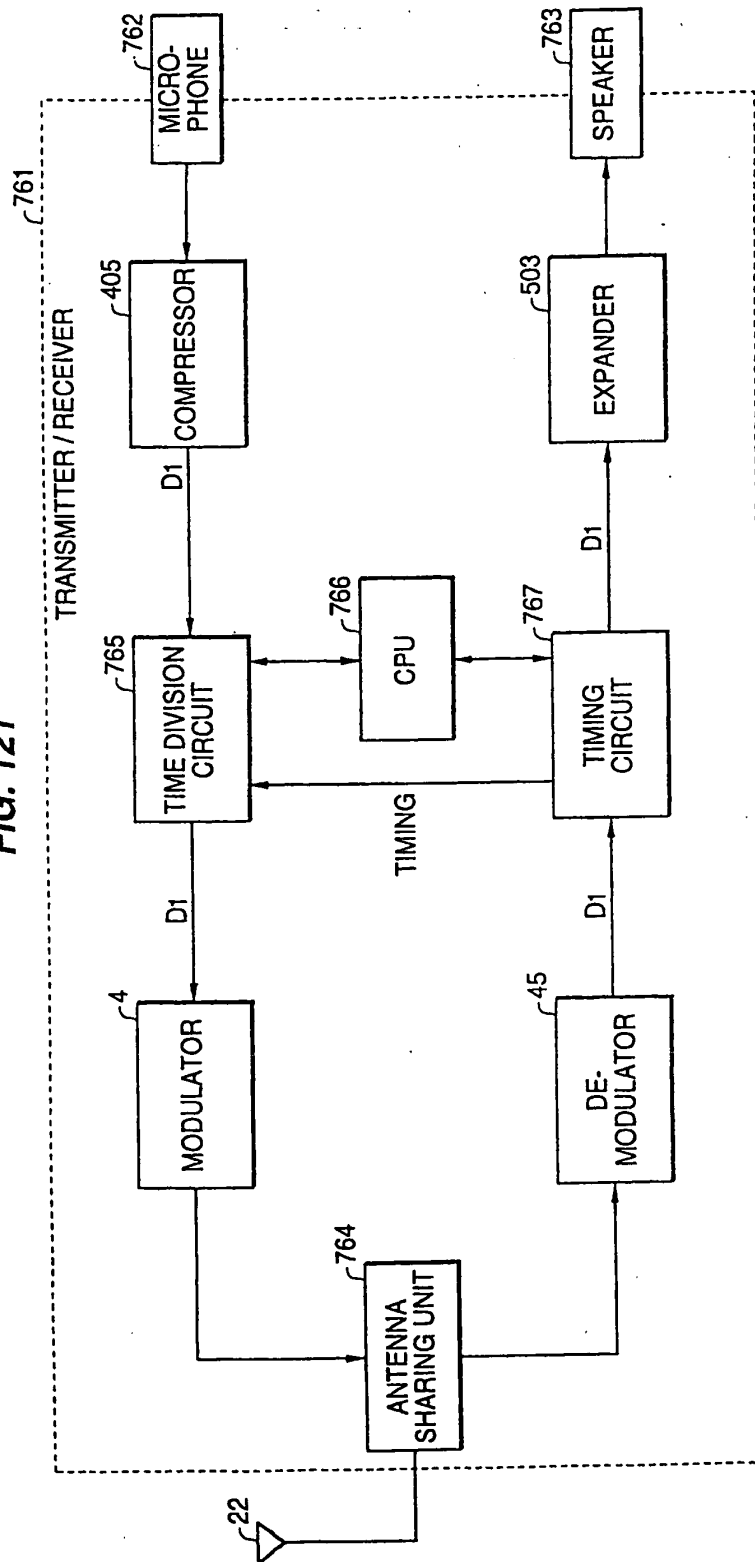
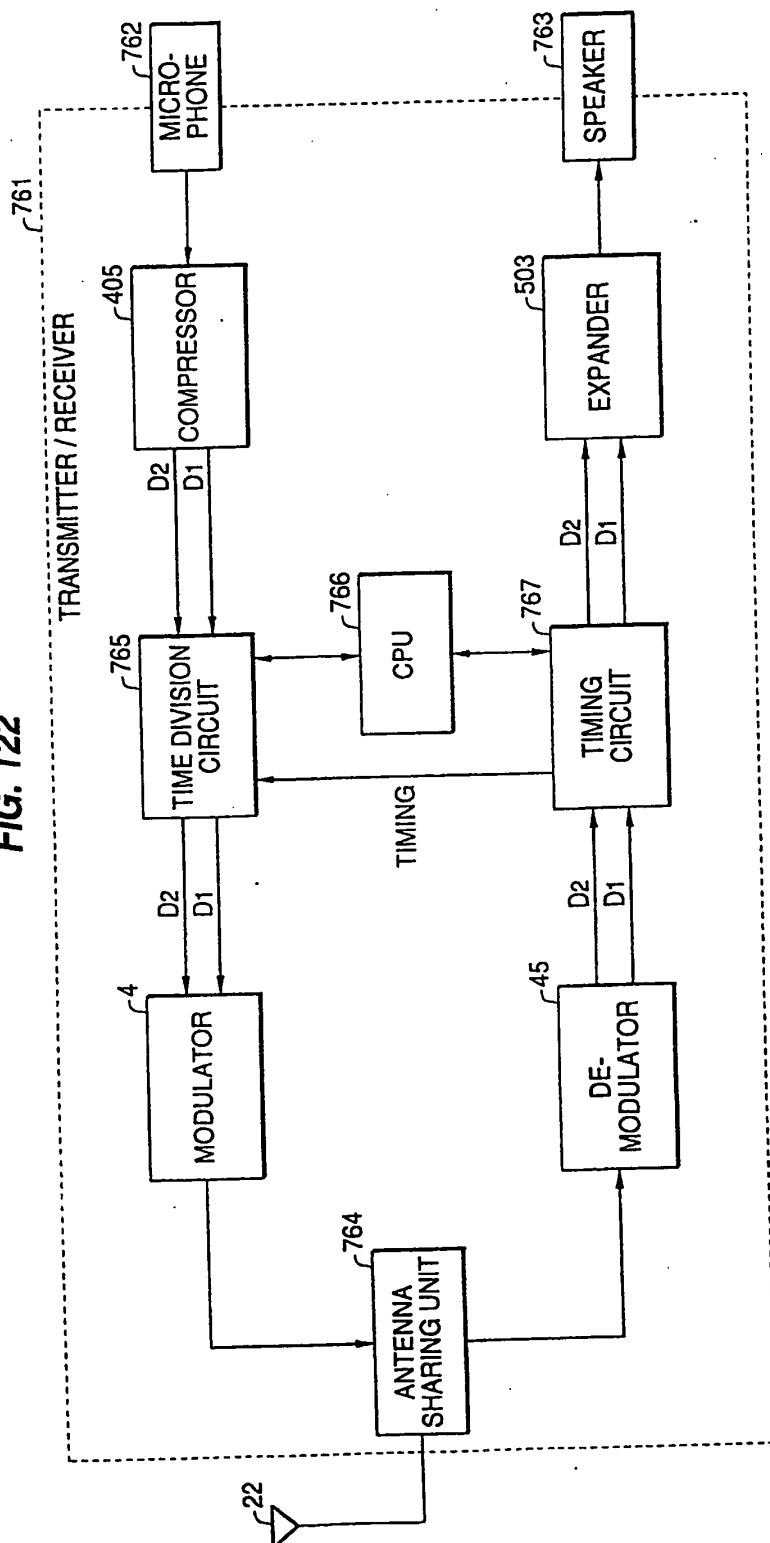
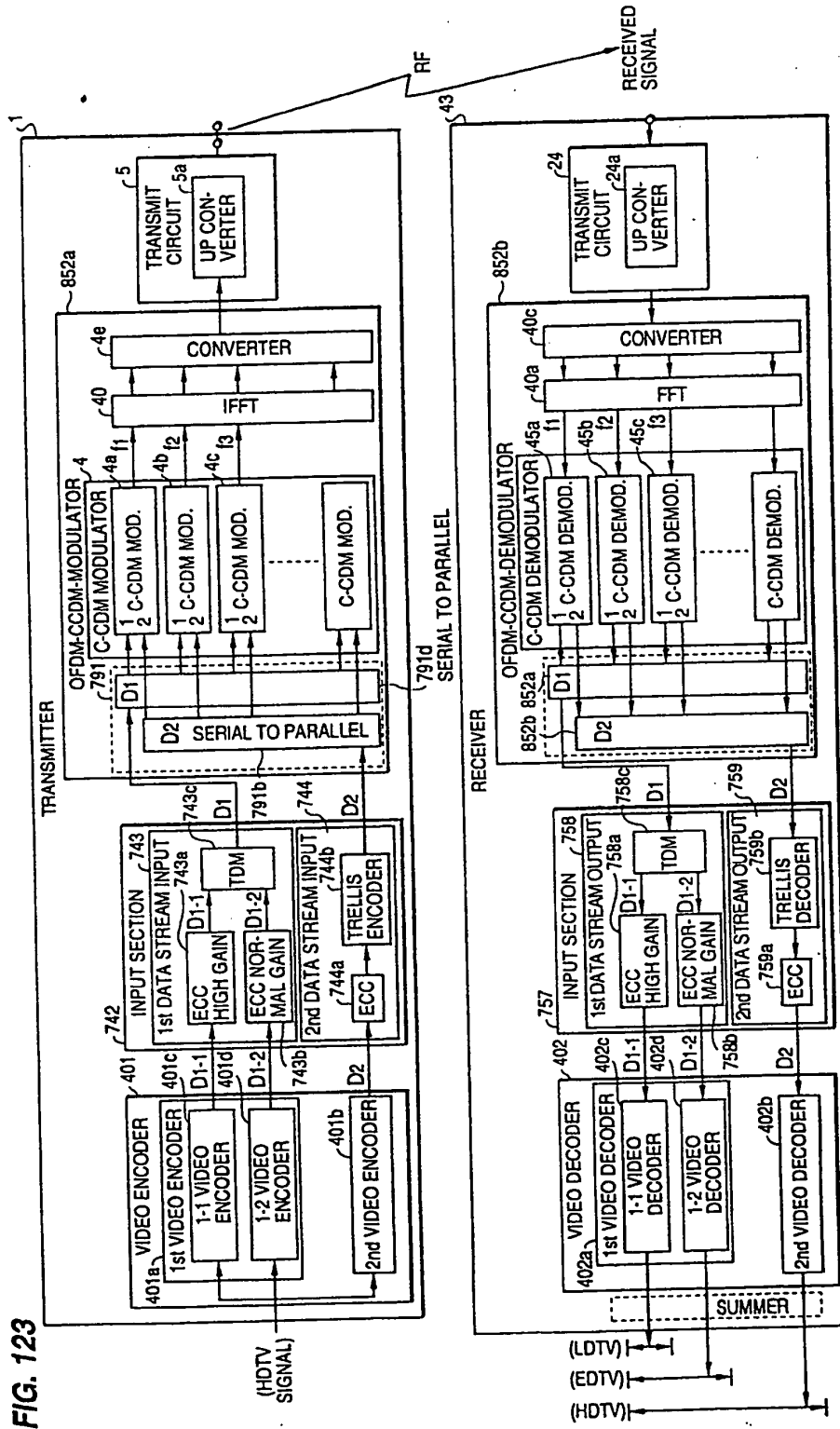


FIG. 122





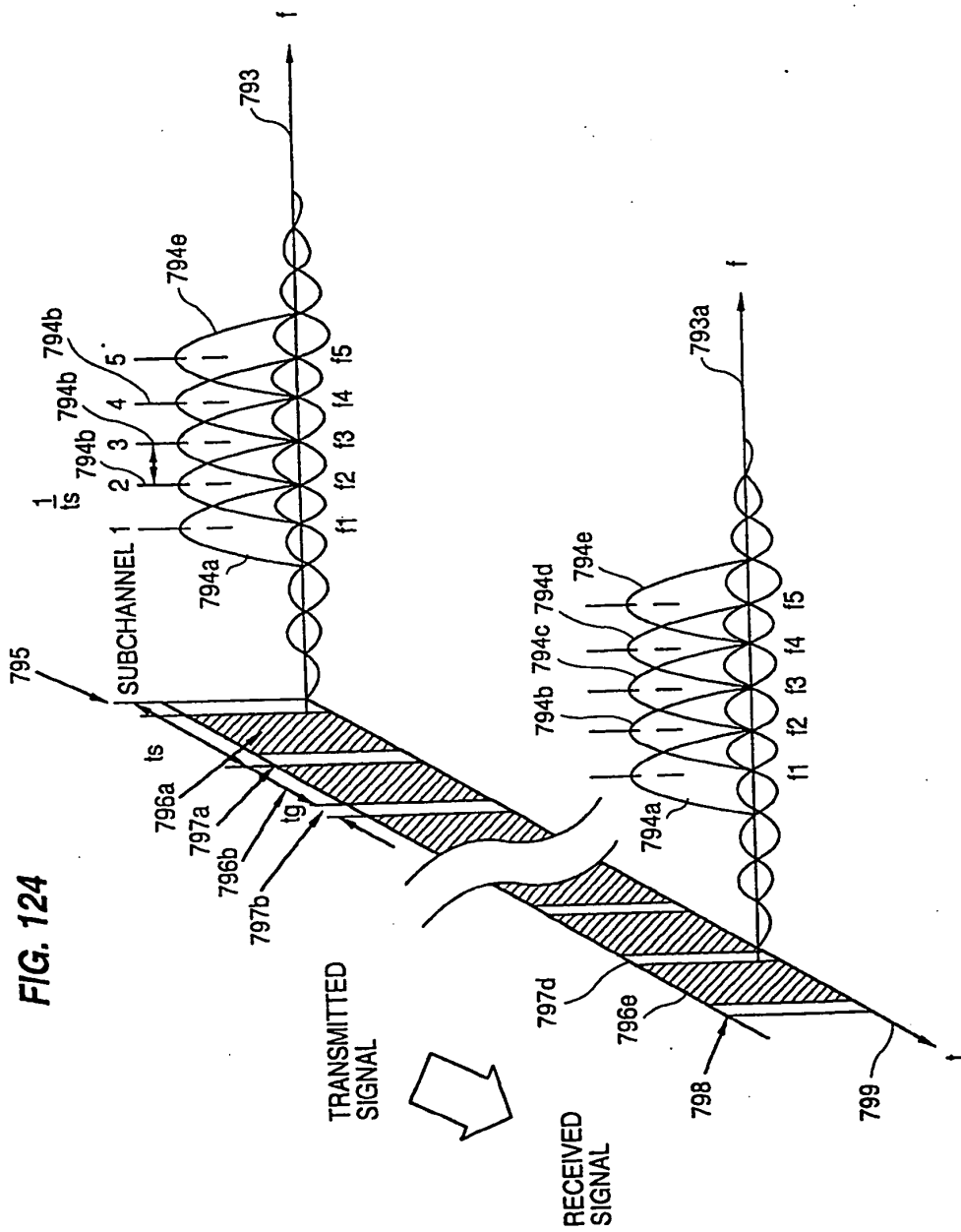


FIG. 125(a)

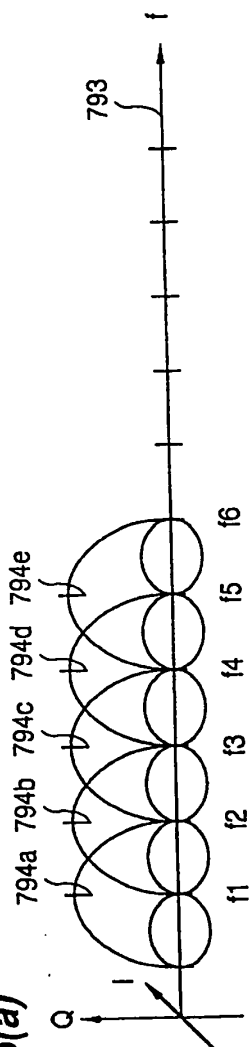
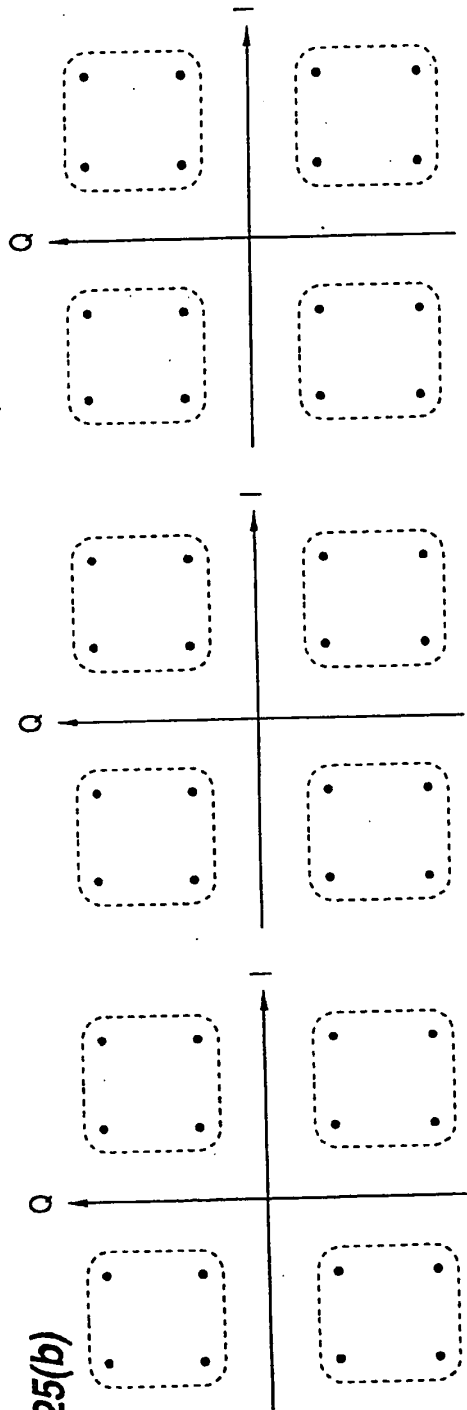
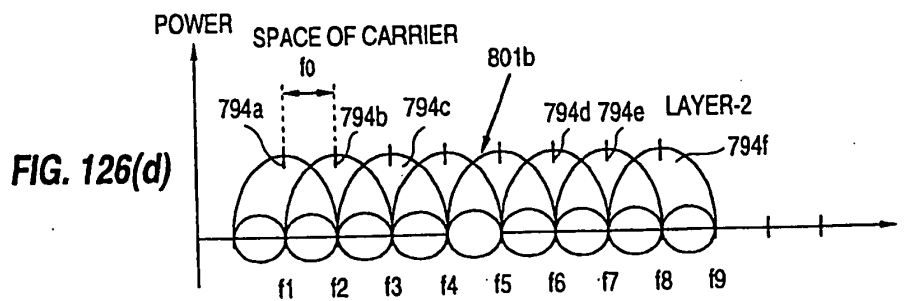
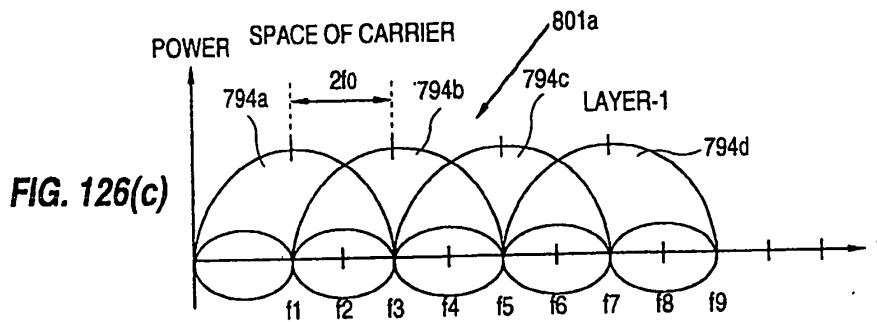
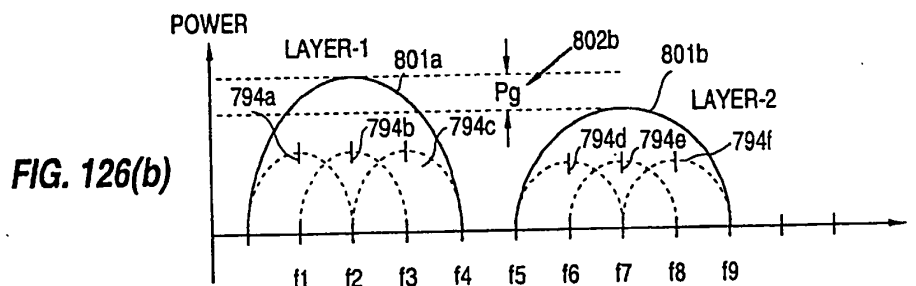
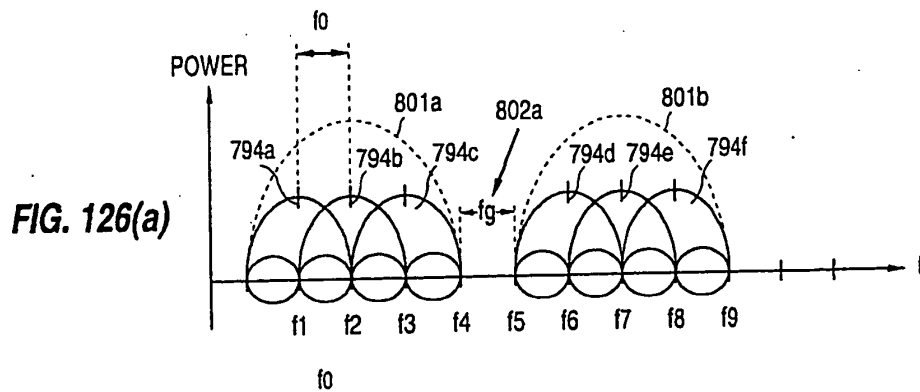


FIG. 125(b)





**FIG. 127**

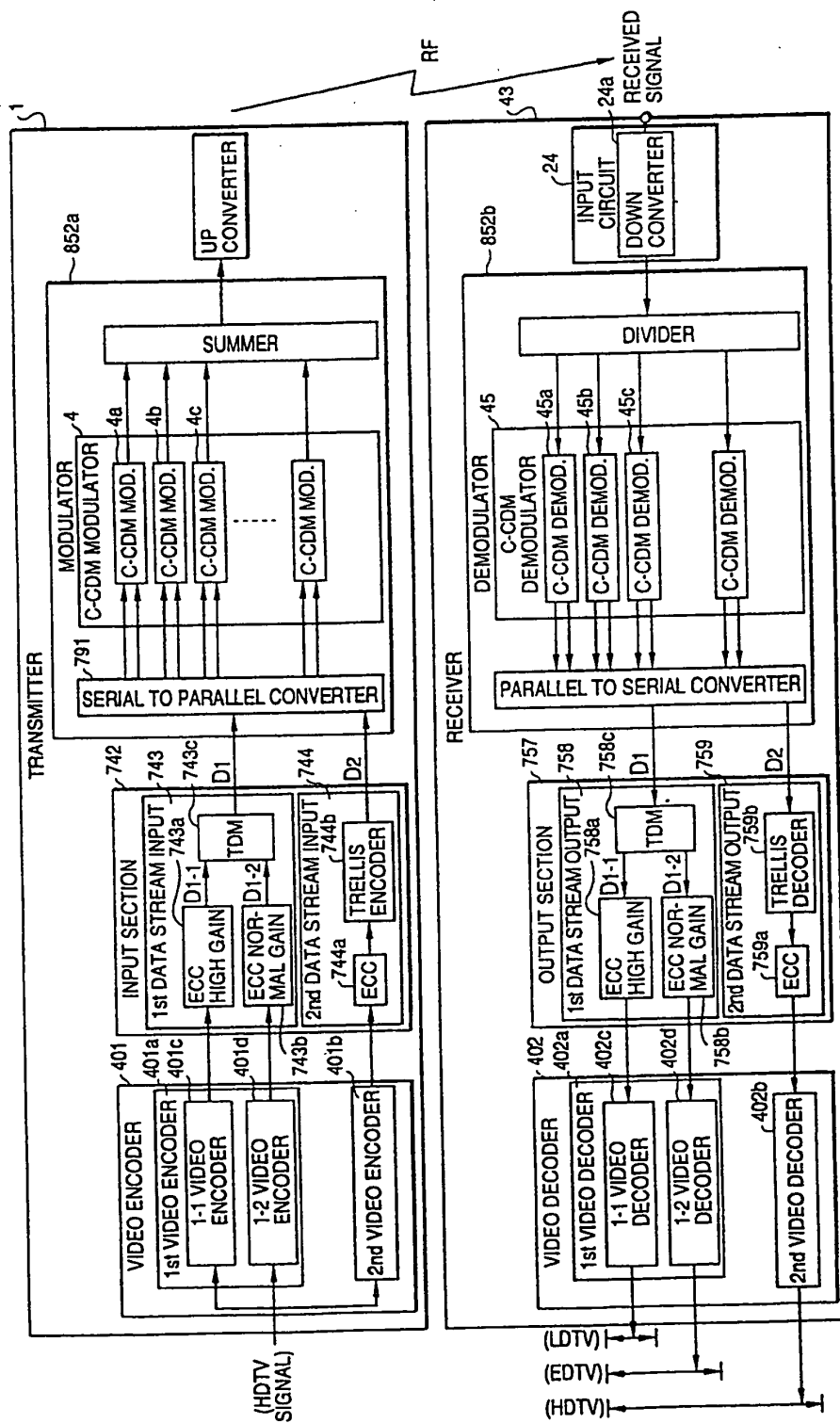


FIG. 128(a)

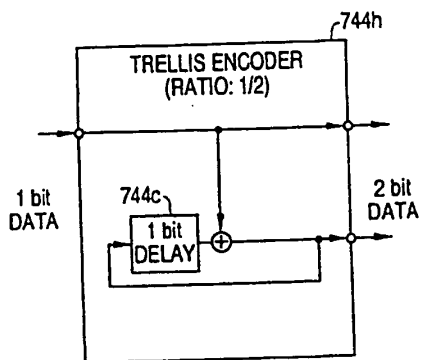


FIG. 128(d)

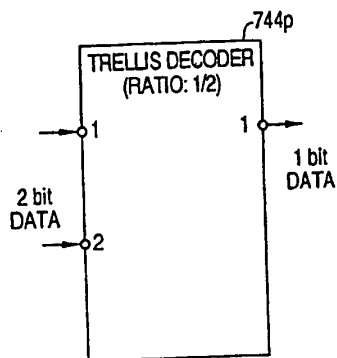


FIG. 128(b)

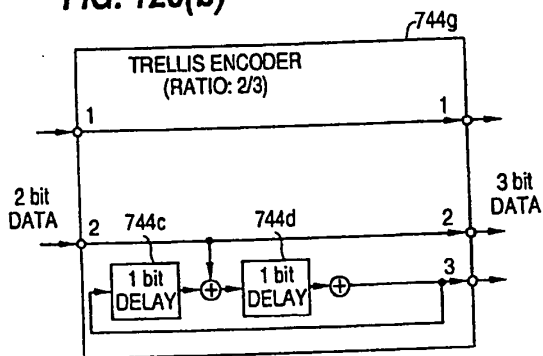


FIG. 128(e)

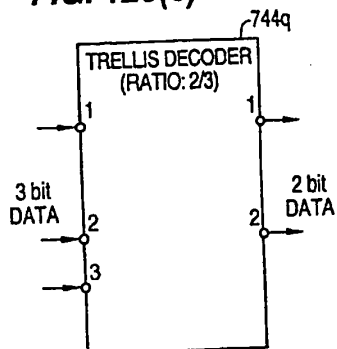


FIG. 128(c)

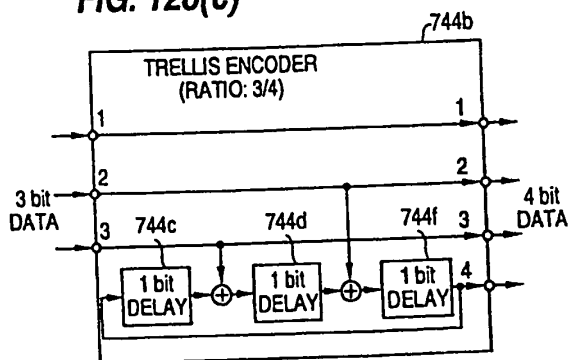


FIG. 128(f)

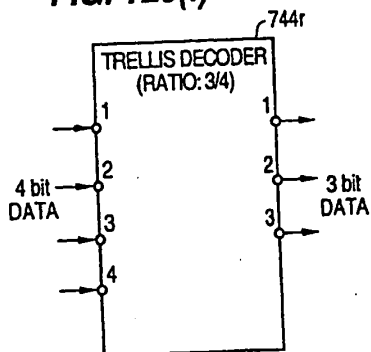




FIG. 129

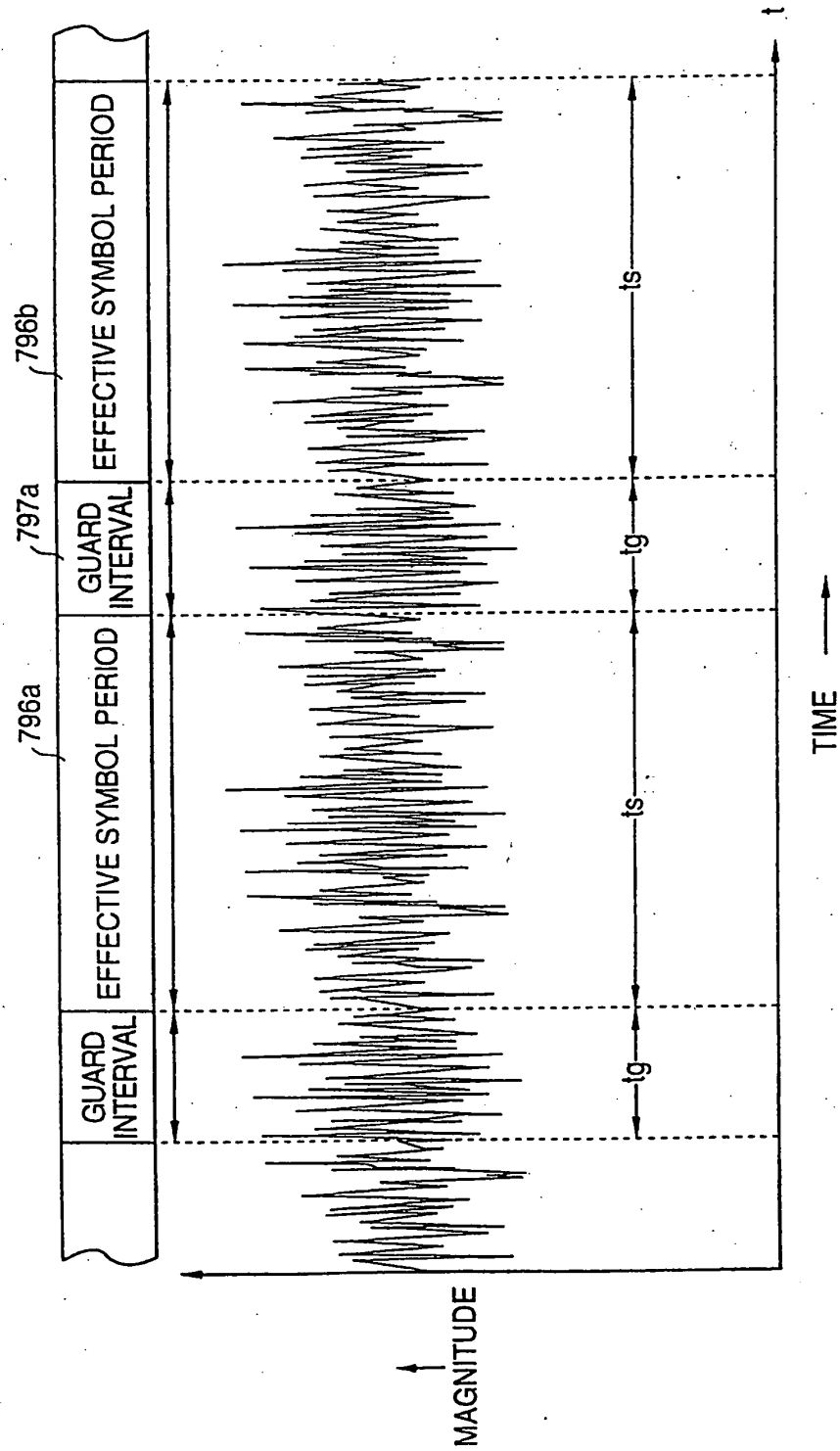


FIG. 130

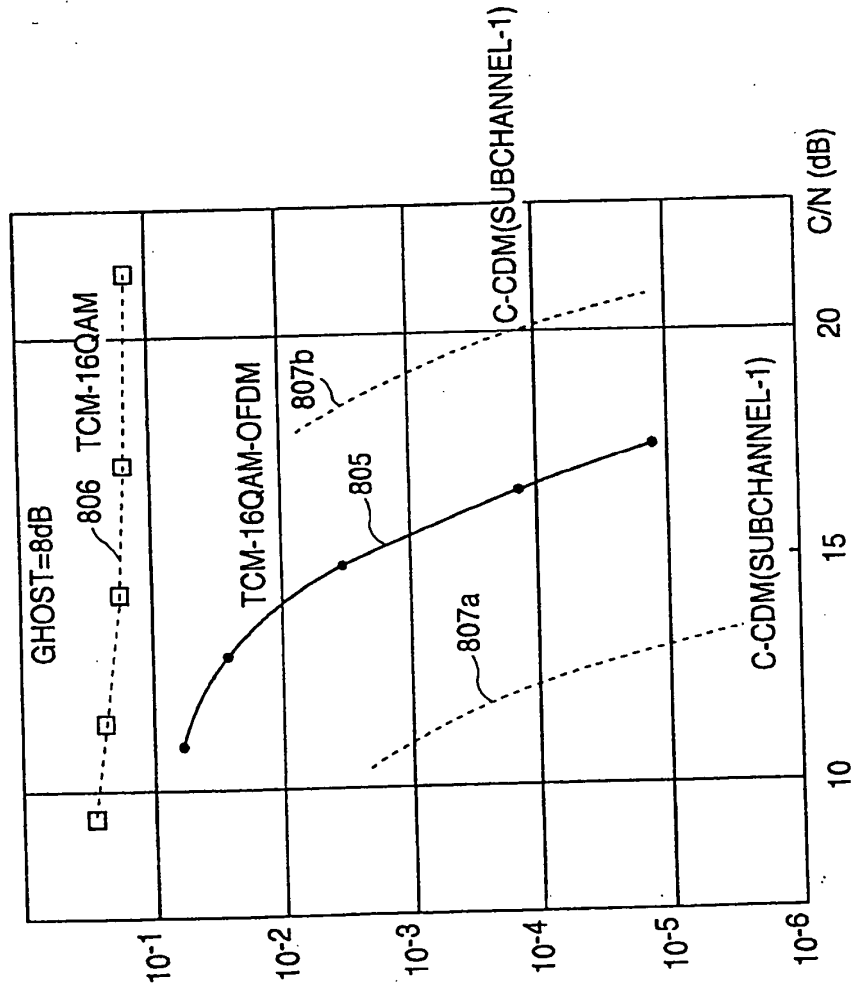
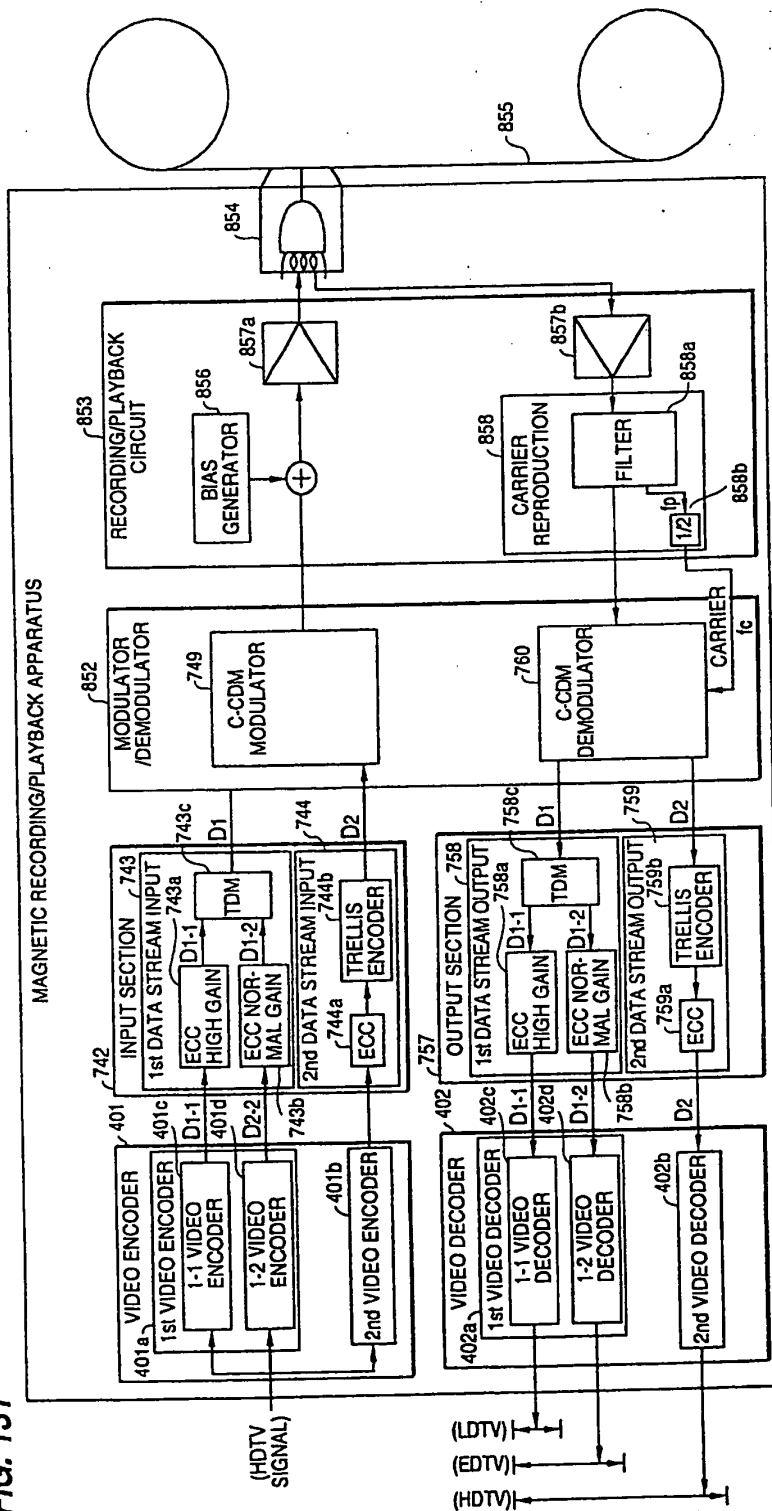


FIG. 131



**FIG. 132**

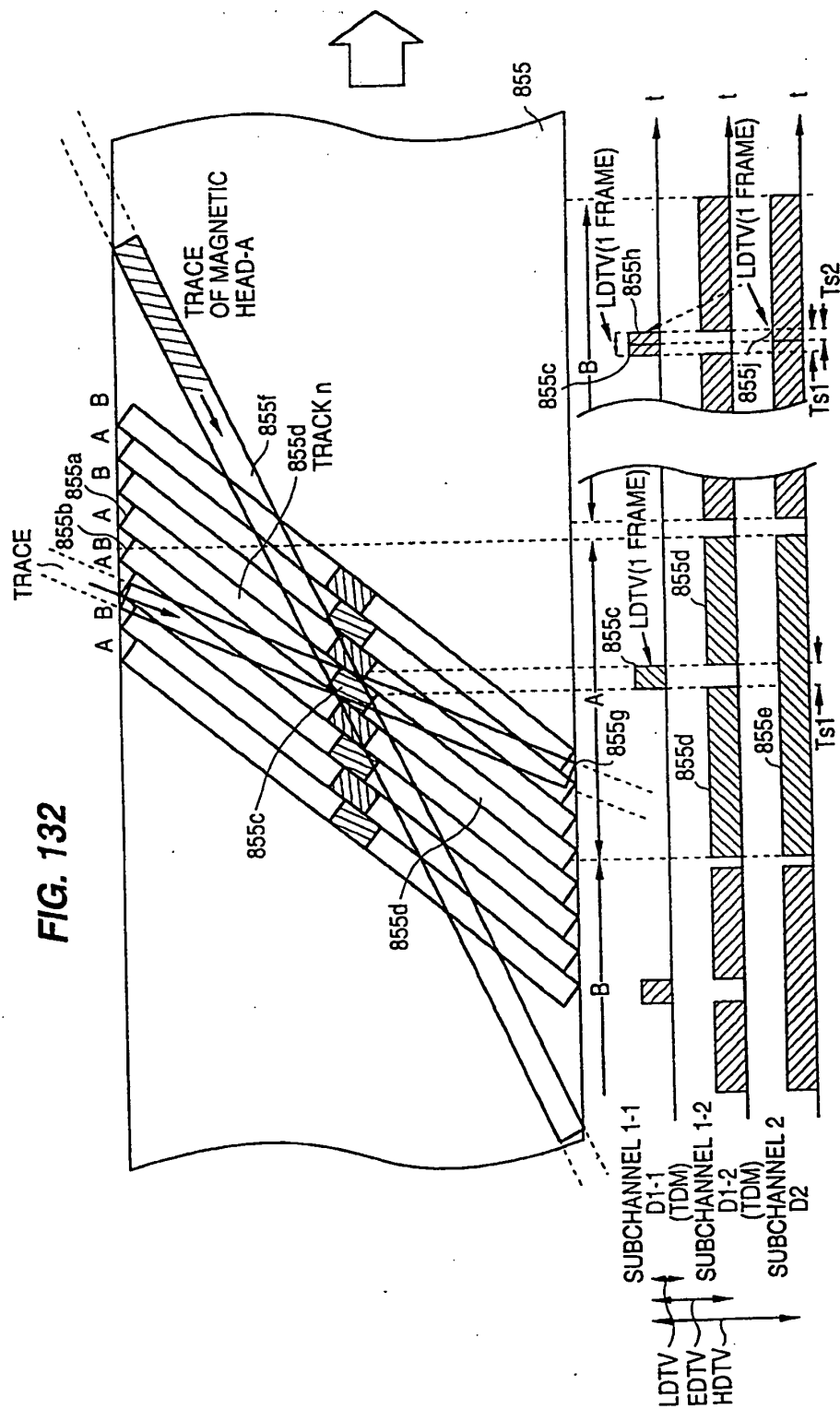


FIG. 133

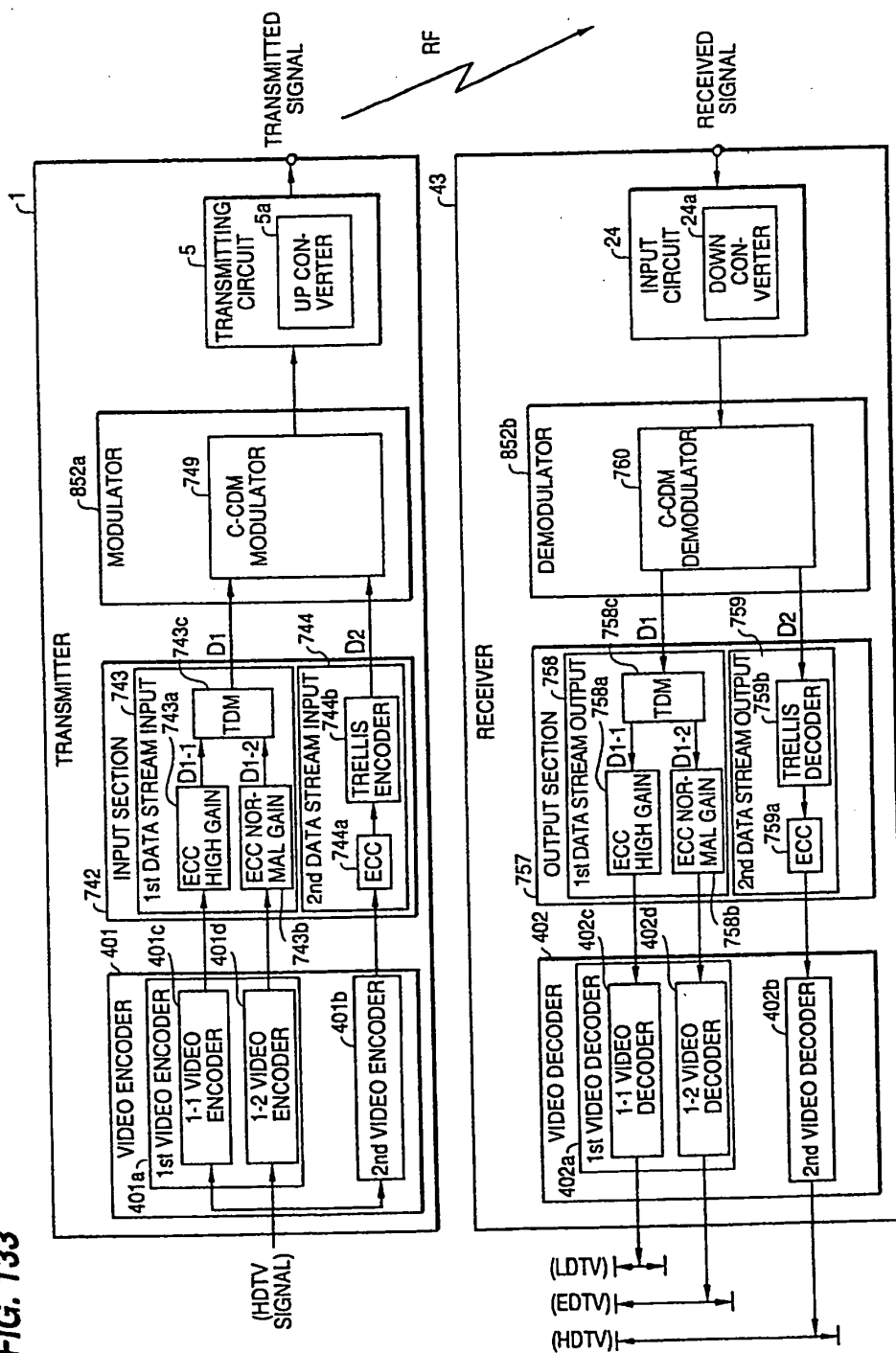


FIG. 134

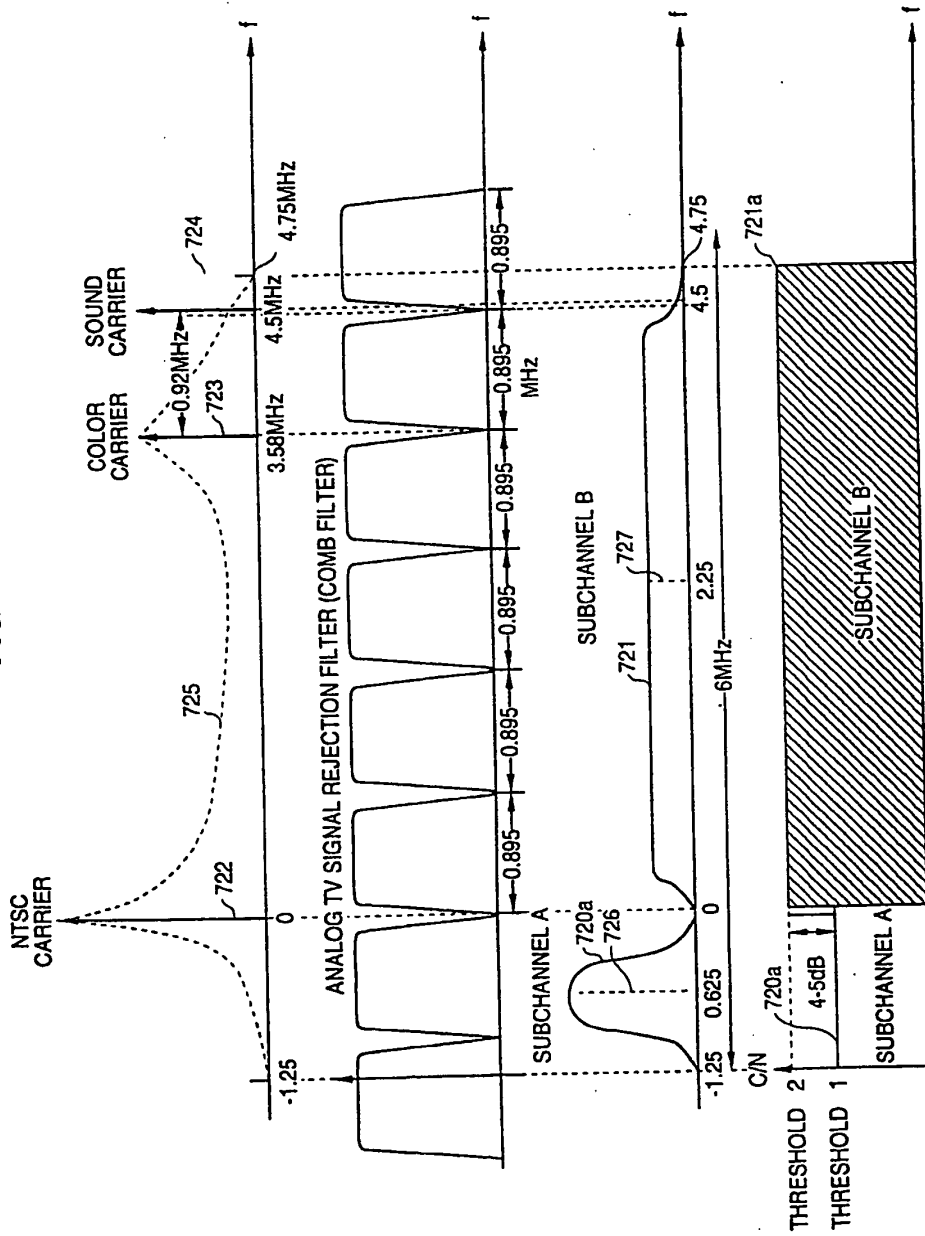


FIG. 135

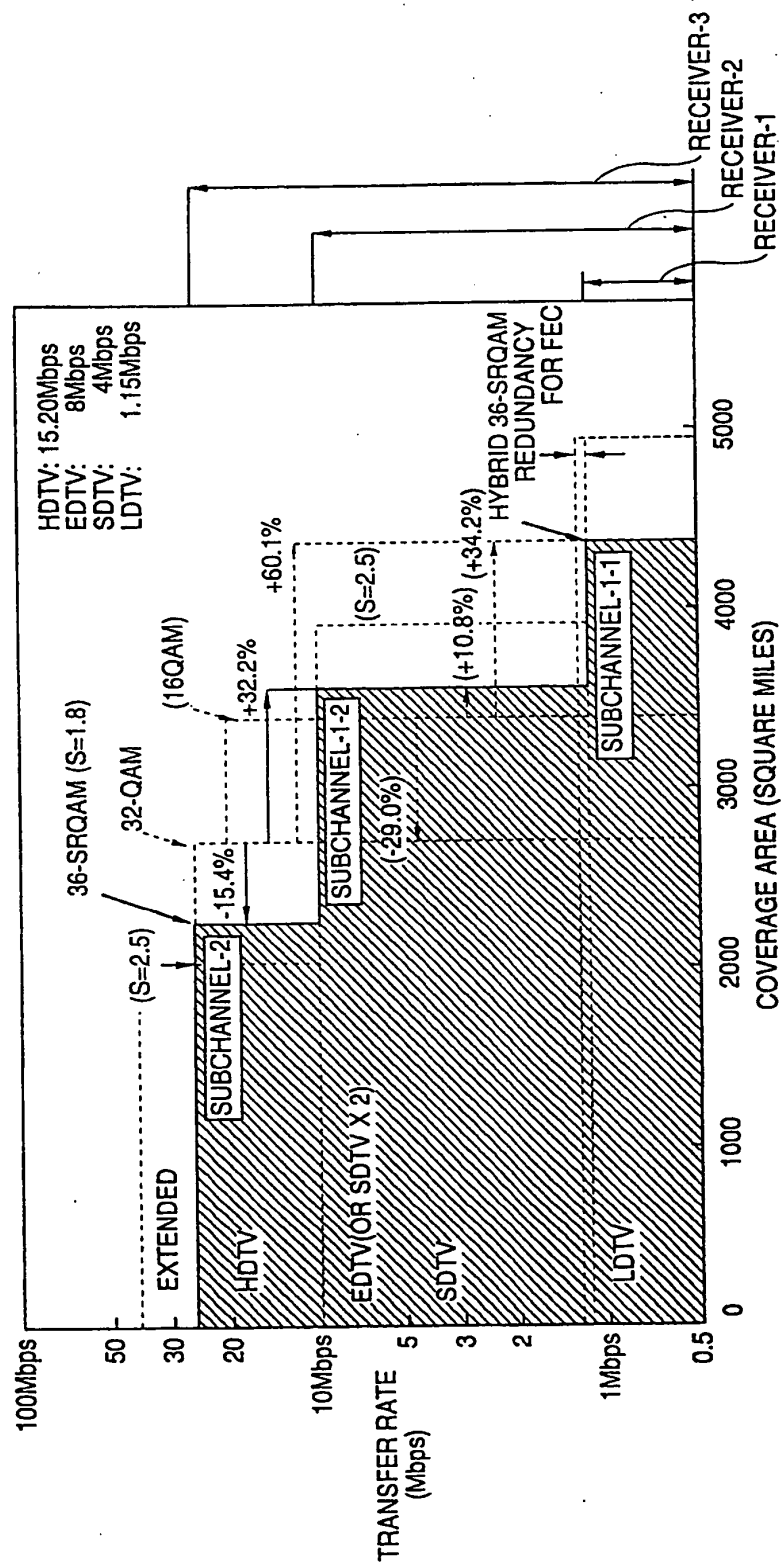


FIG. 136

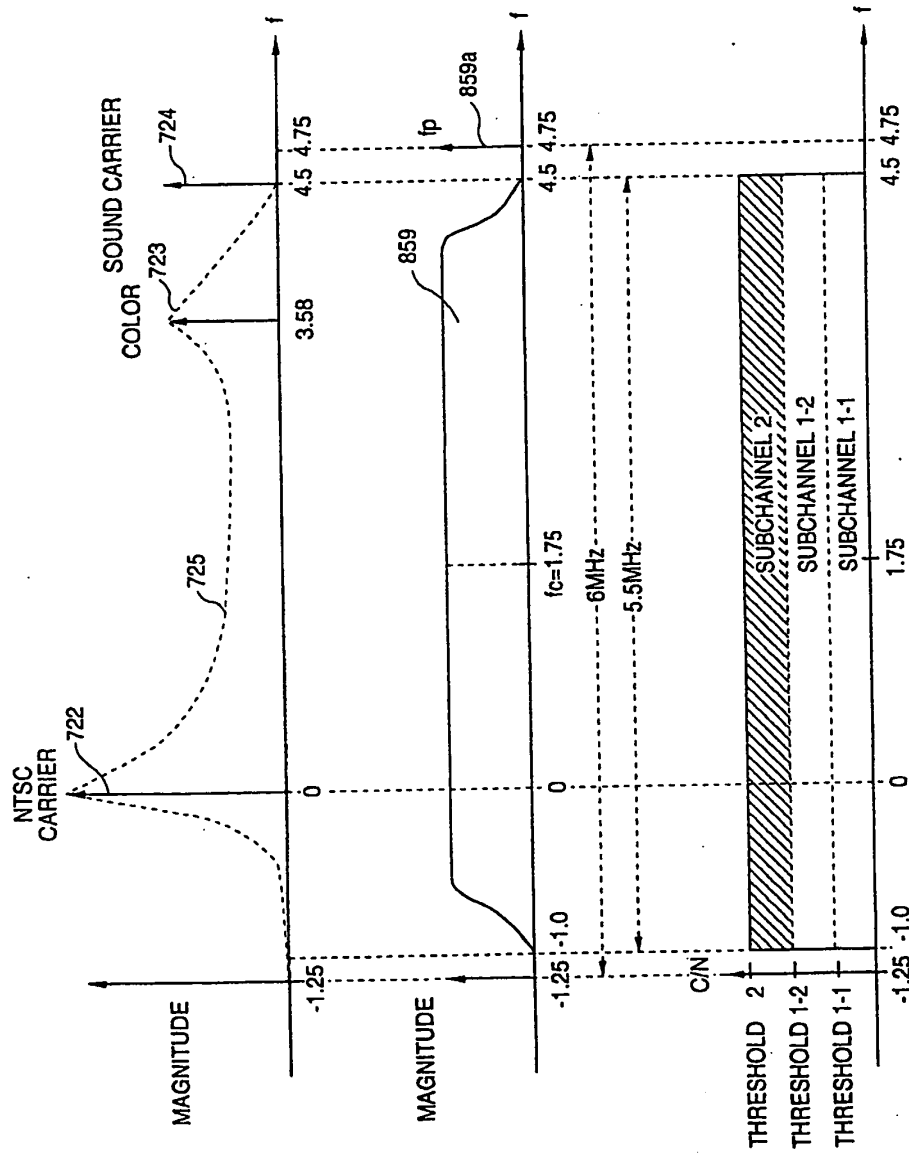
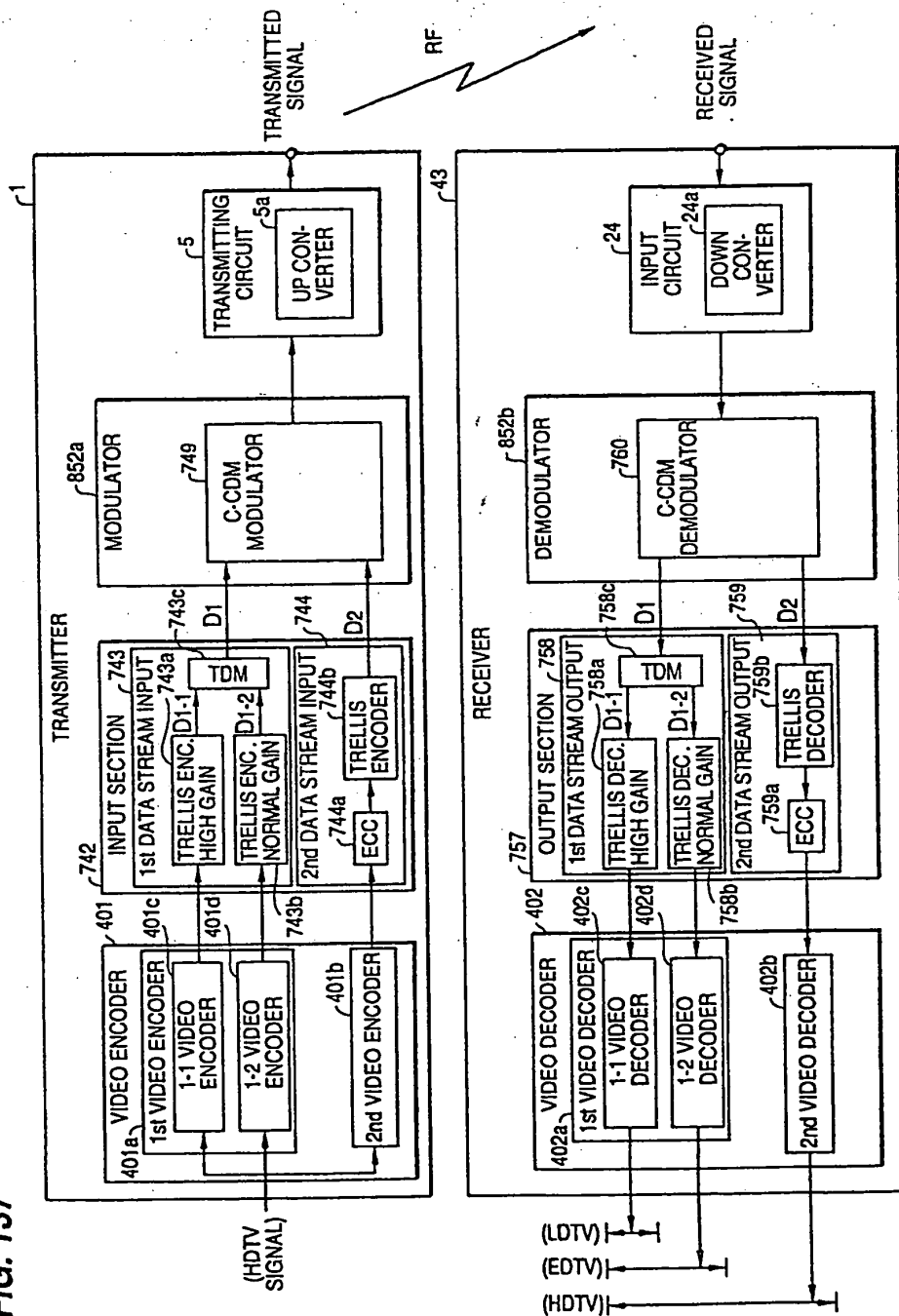




FIG. 137



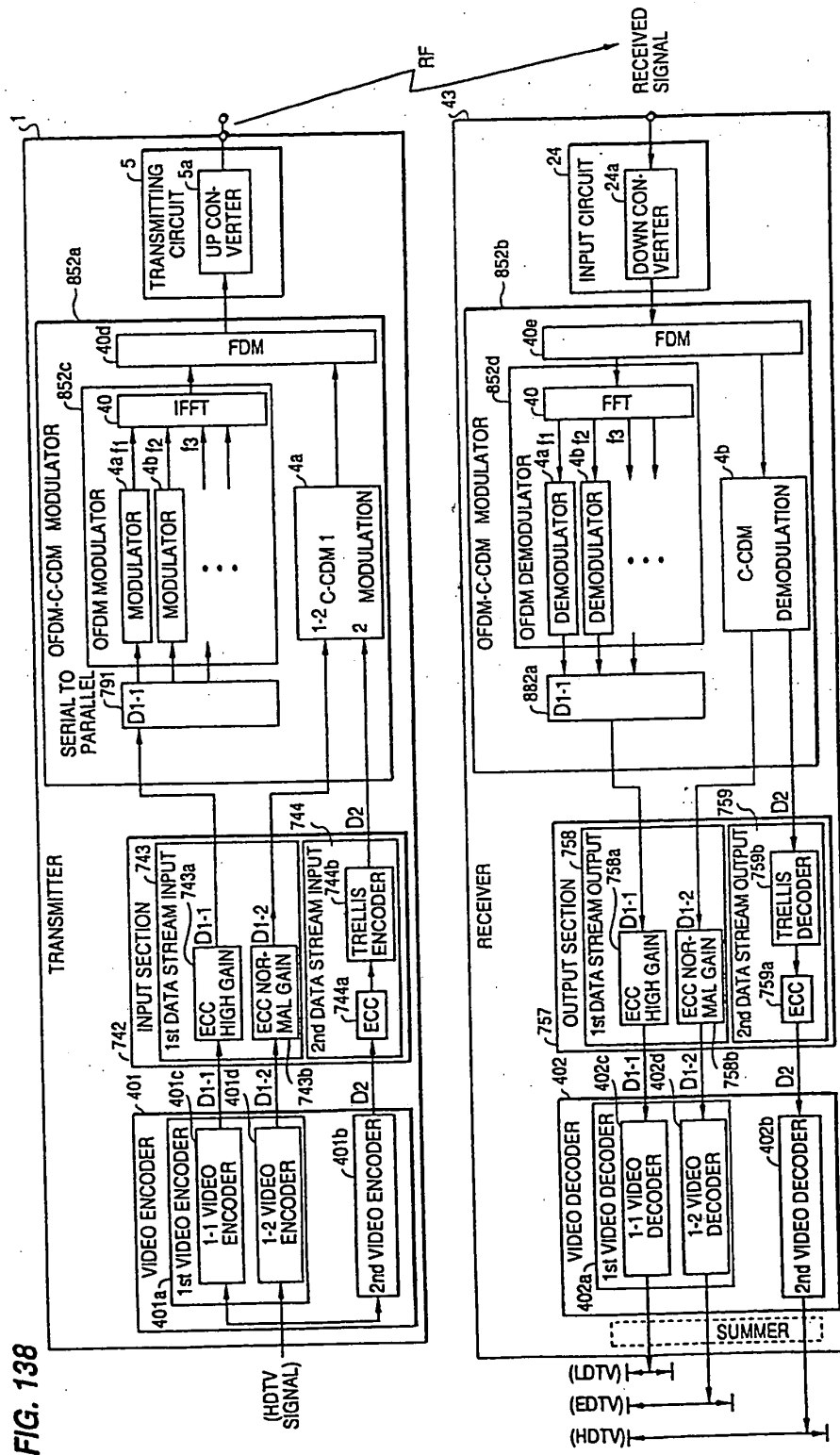


FIG. 139

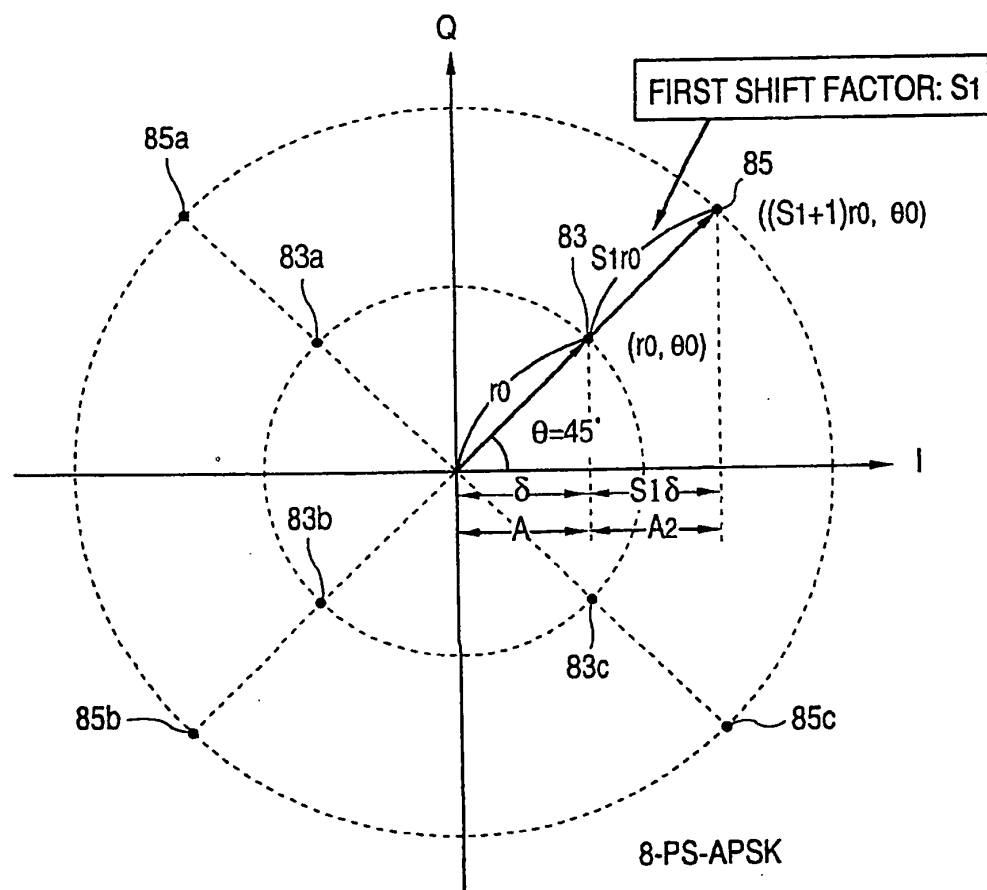


FIG. 140

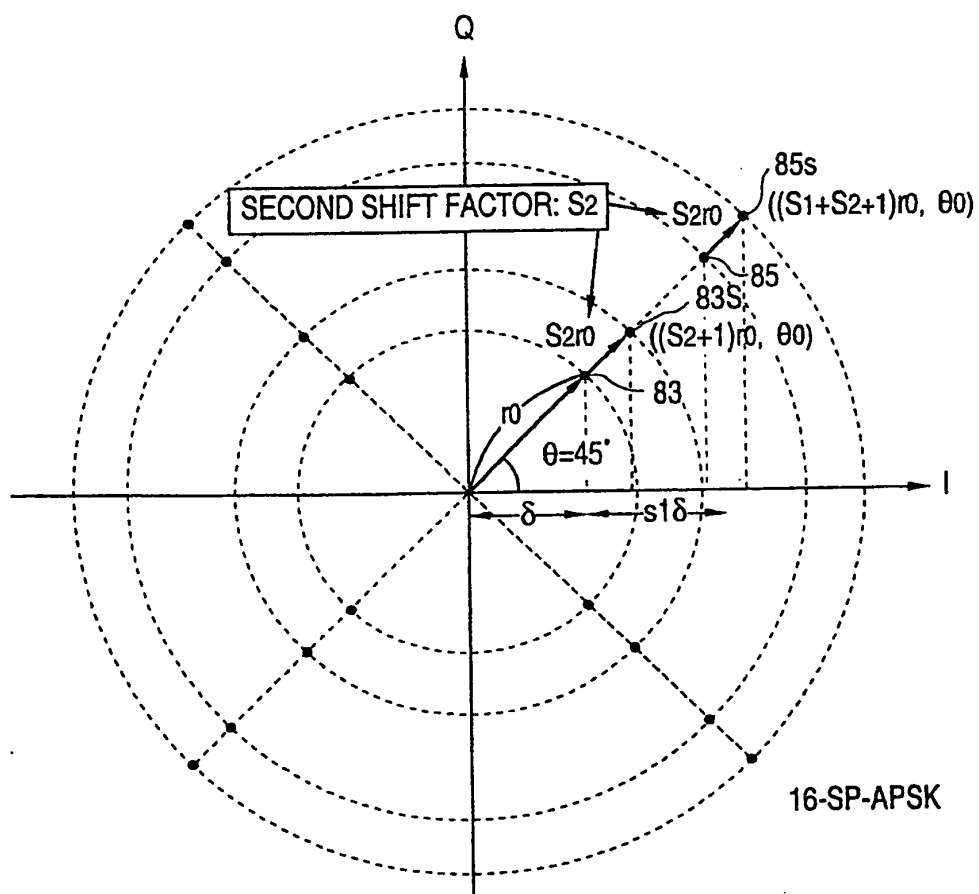


FIG. 141

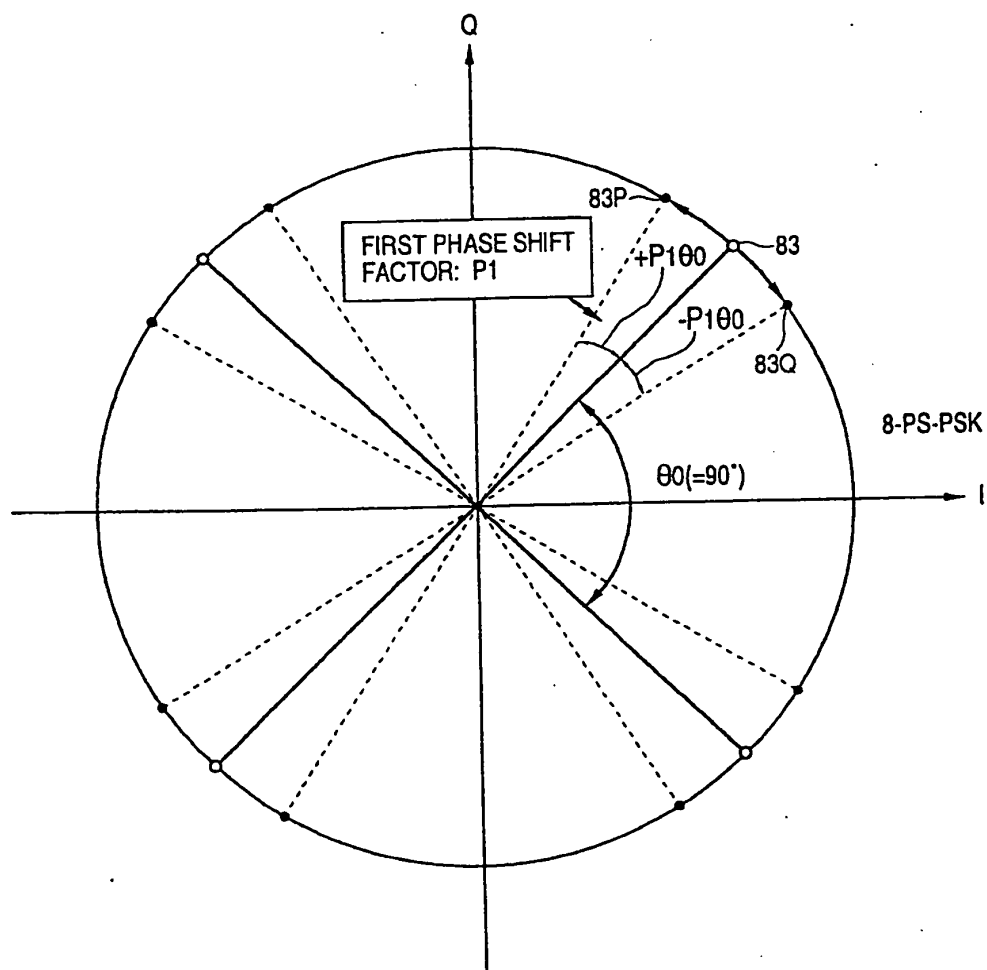


FIG. 142

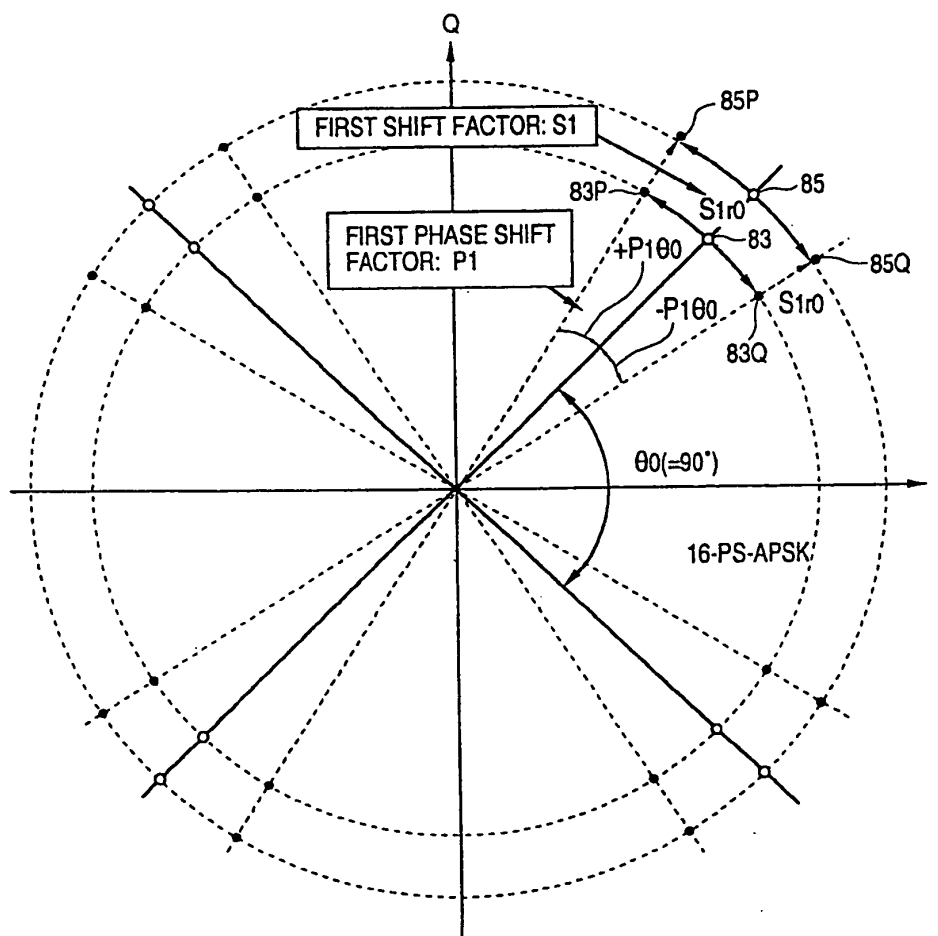
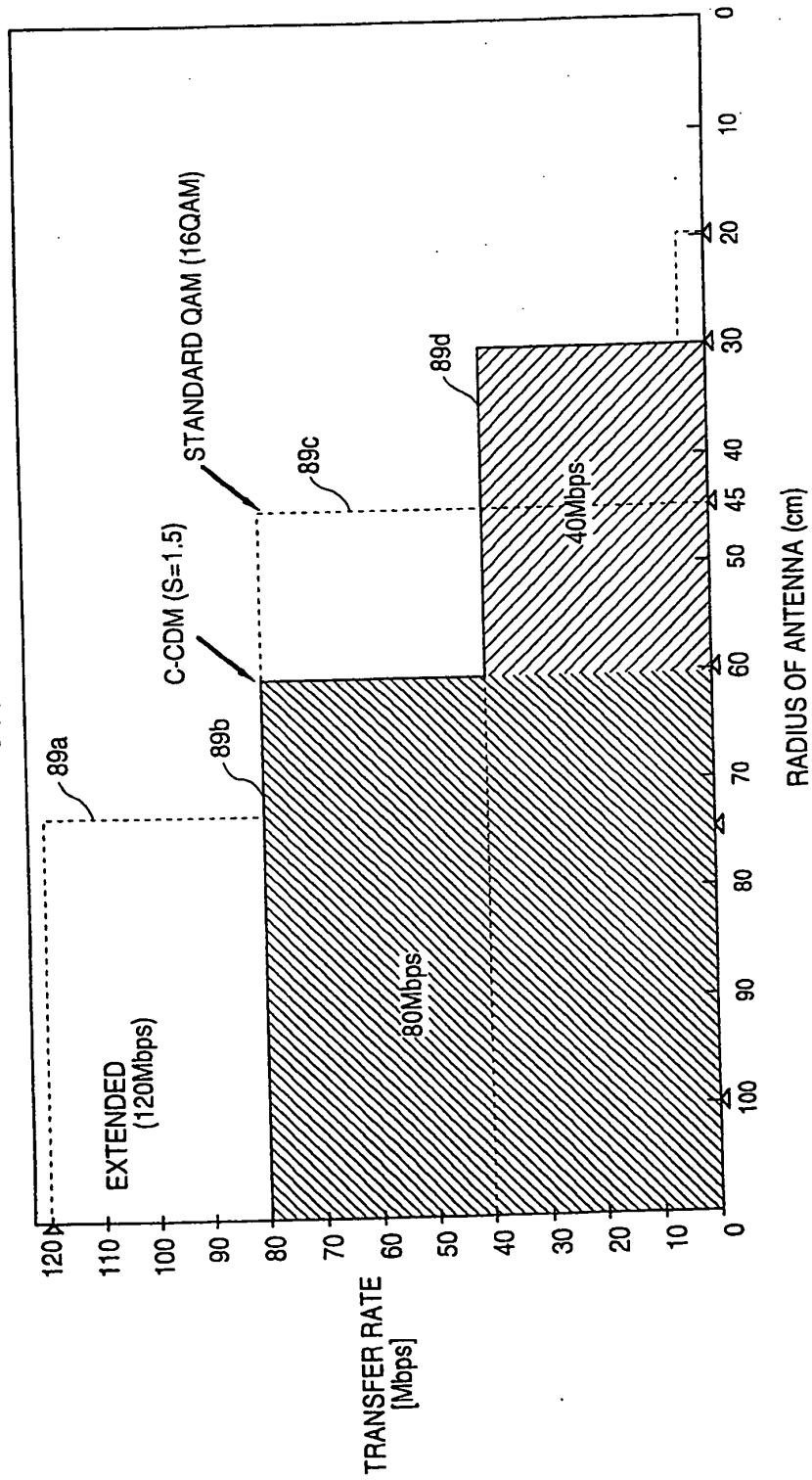


FIG. 143



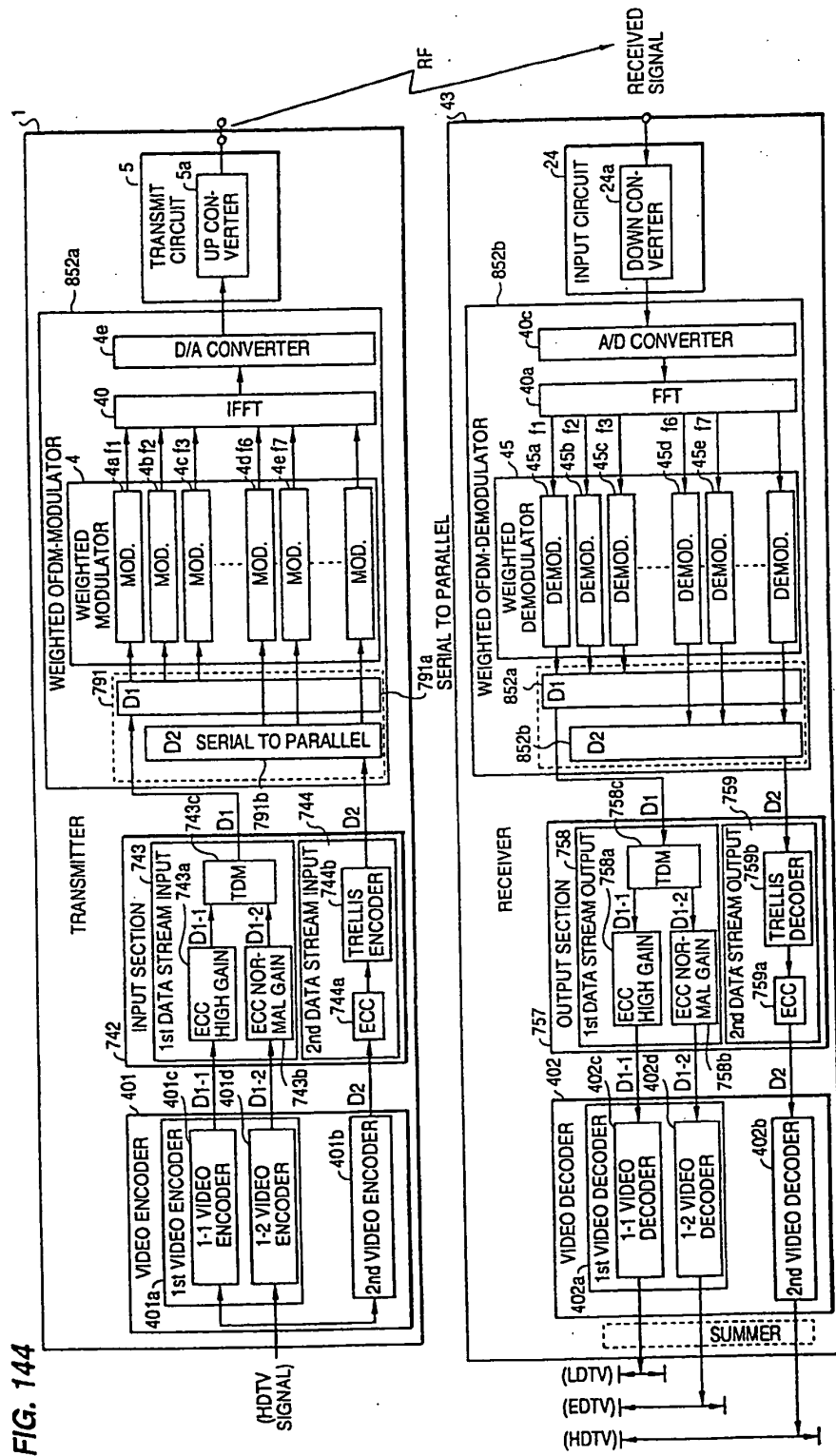




FIG. 145(a)

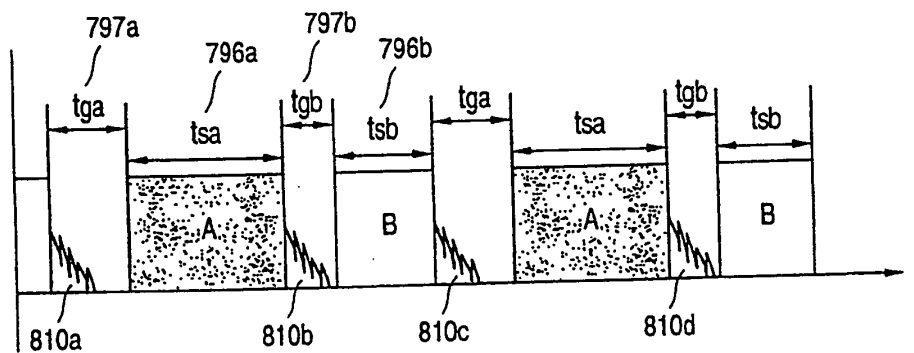


FIG. 145(b)

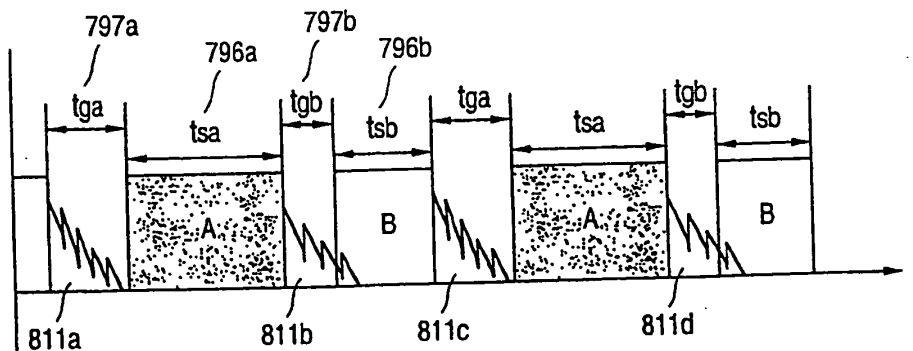




FIG. 147

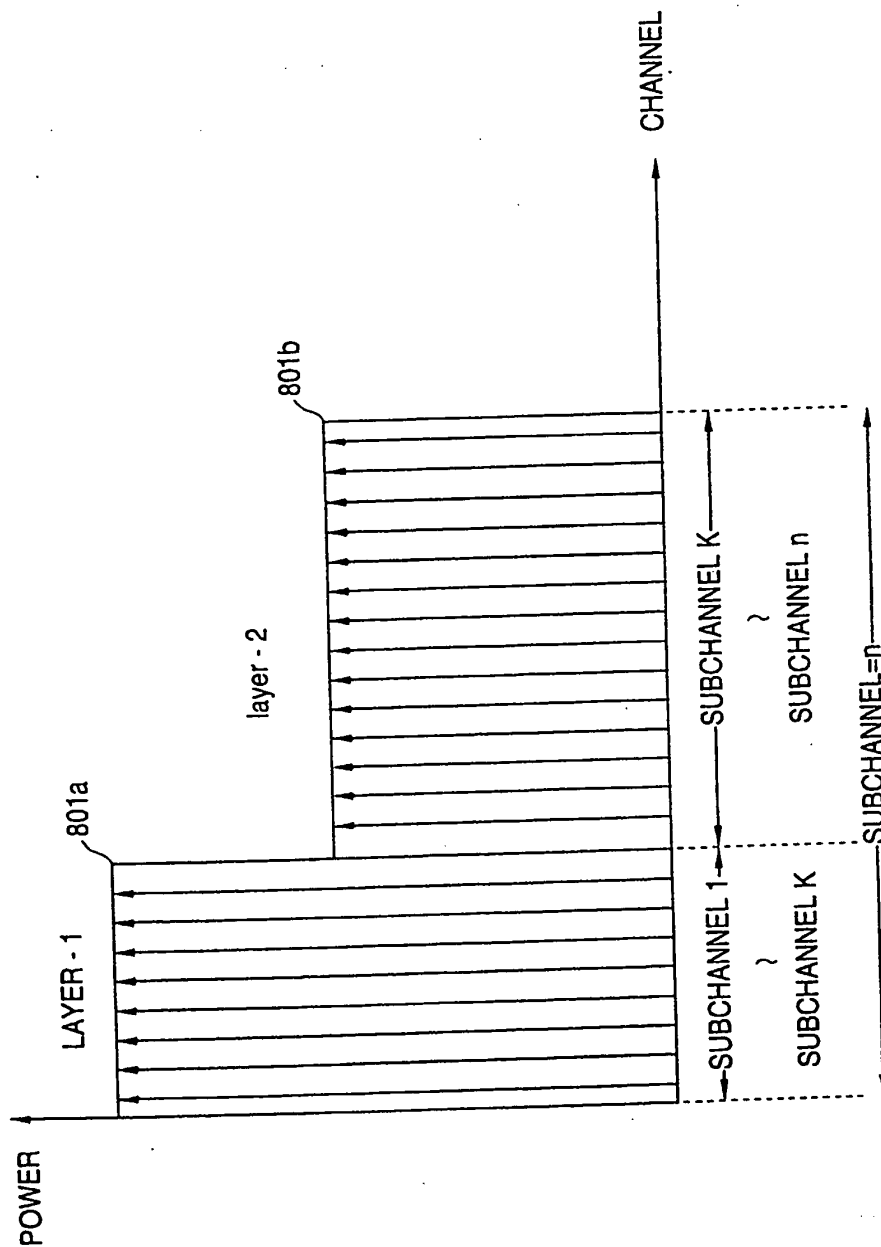
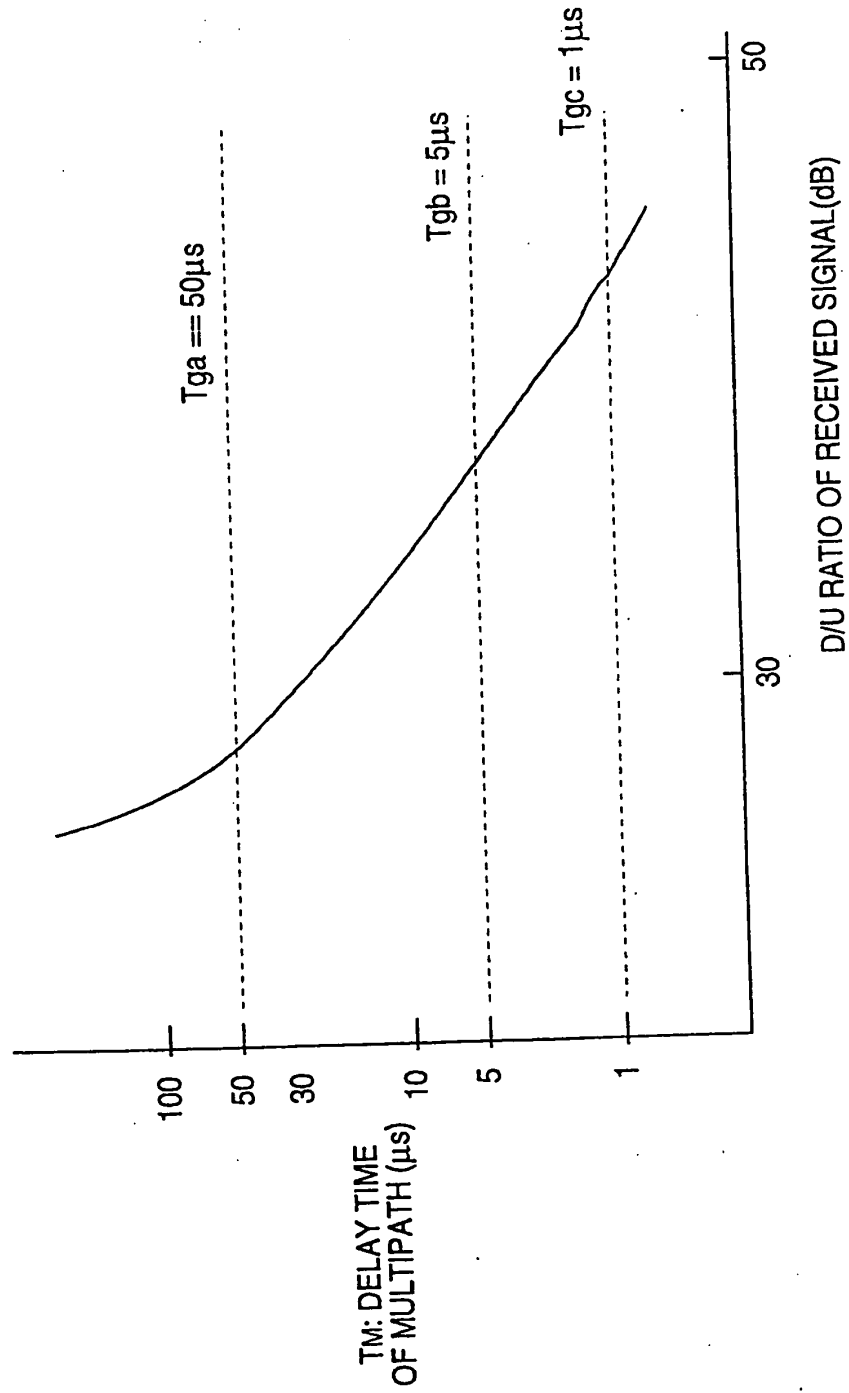


FIG. 148



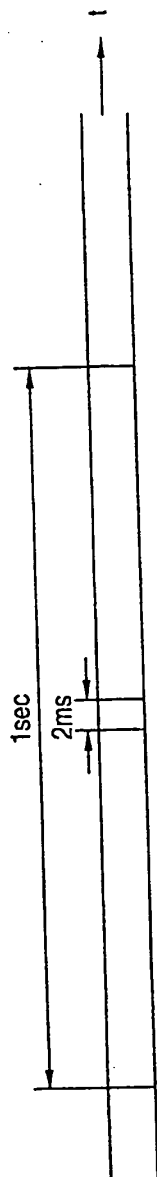


FIG. 149(a)

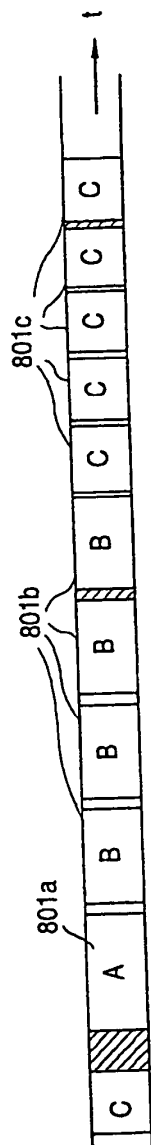


FIG. 149(b)

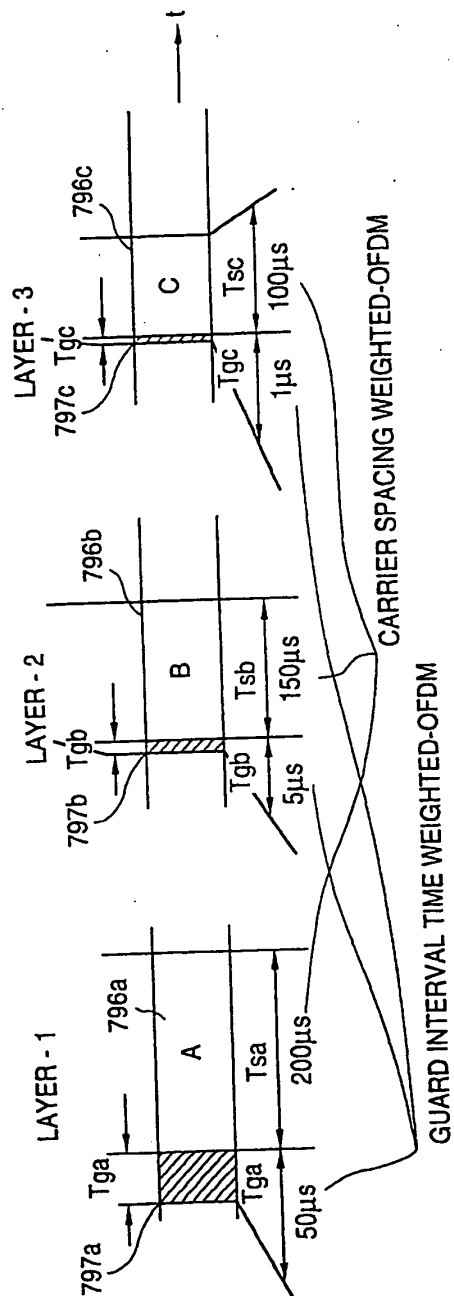


FIG. 149(c)

FIG. 150

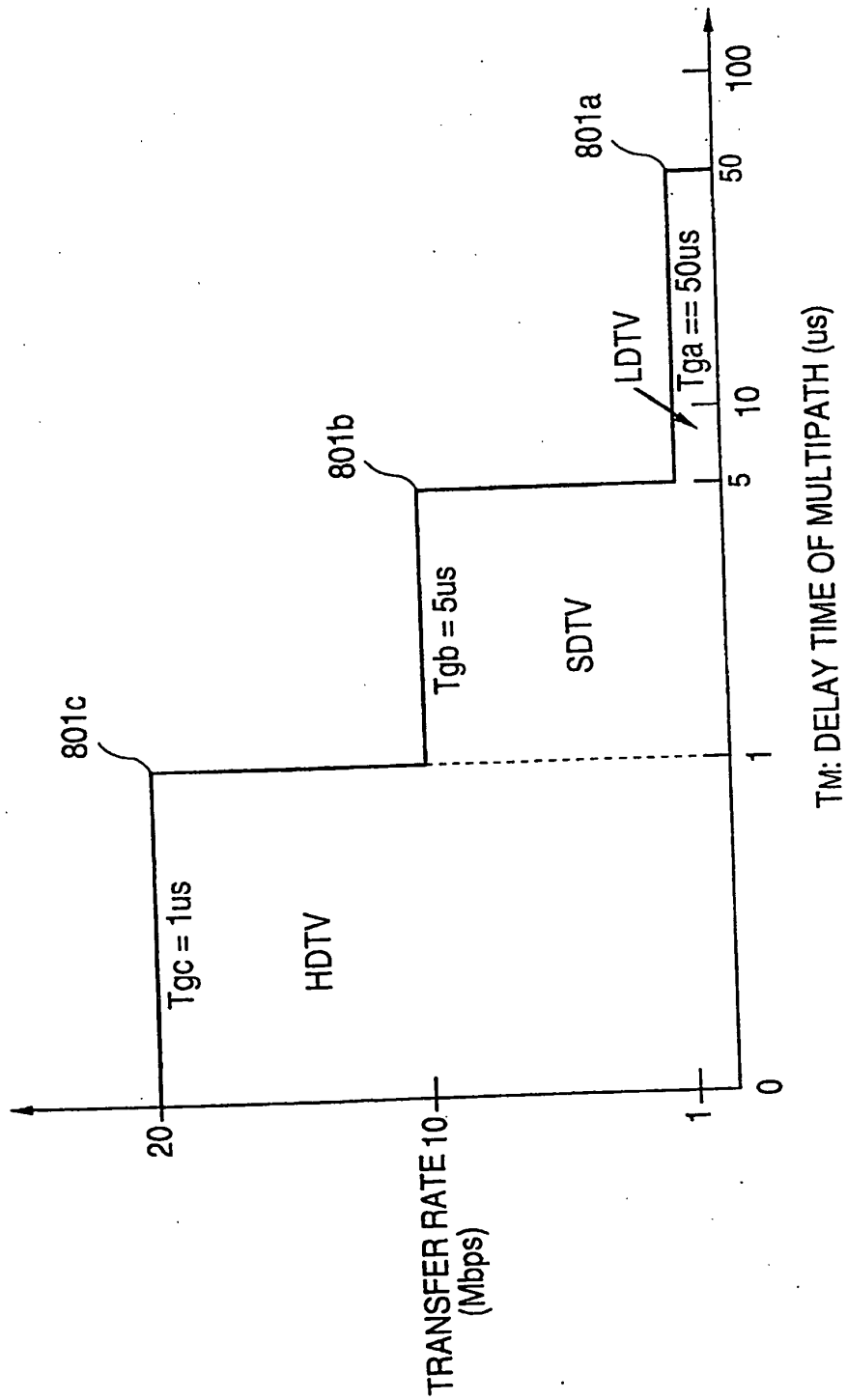


FIG. 151

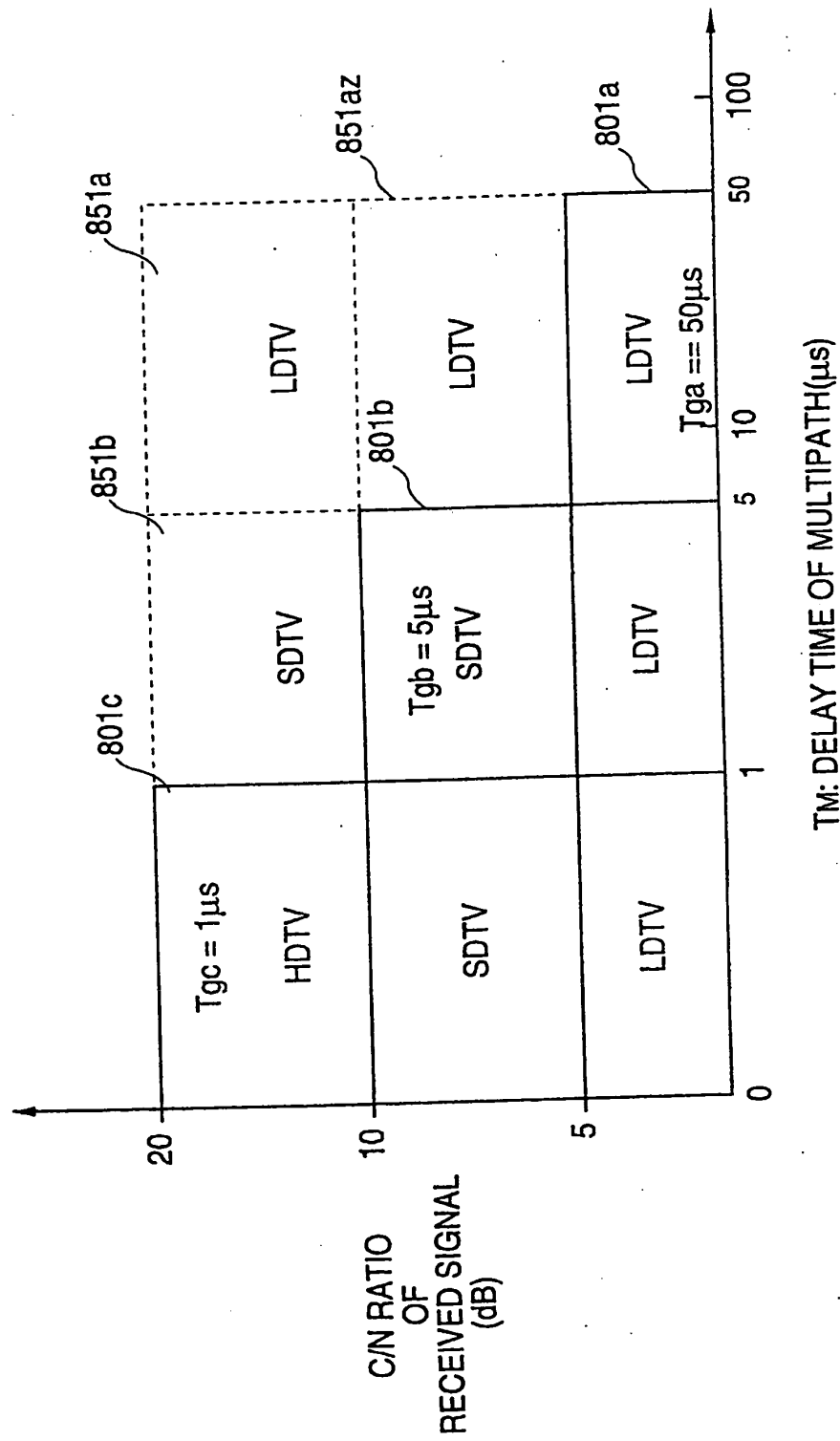
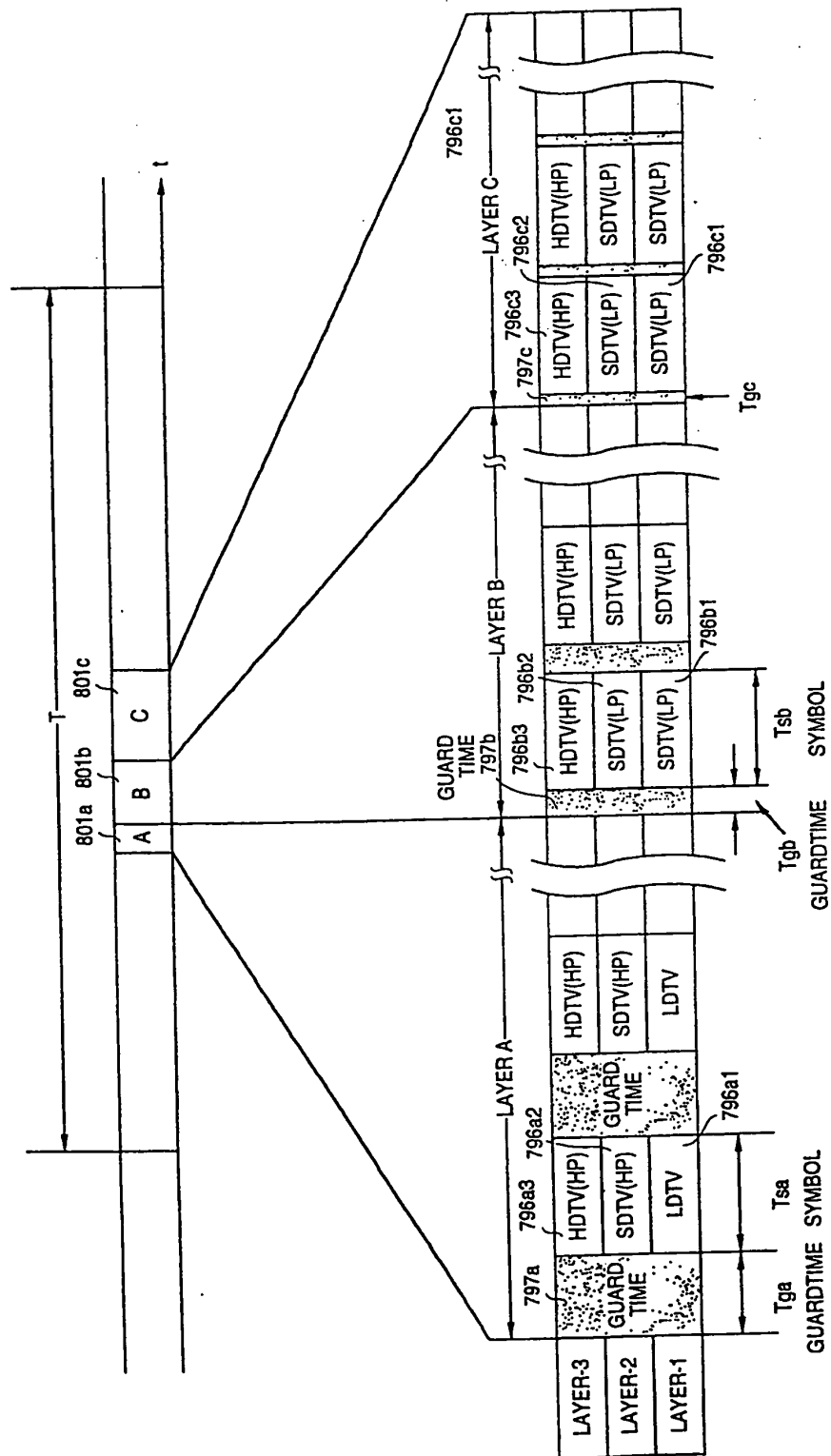
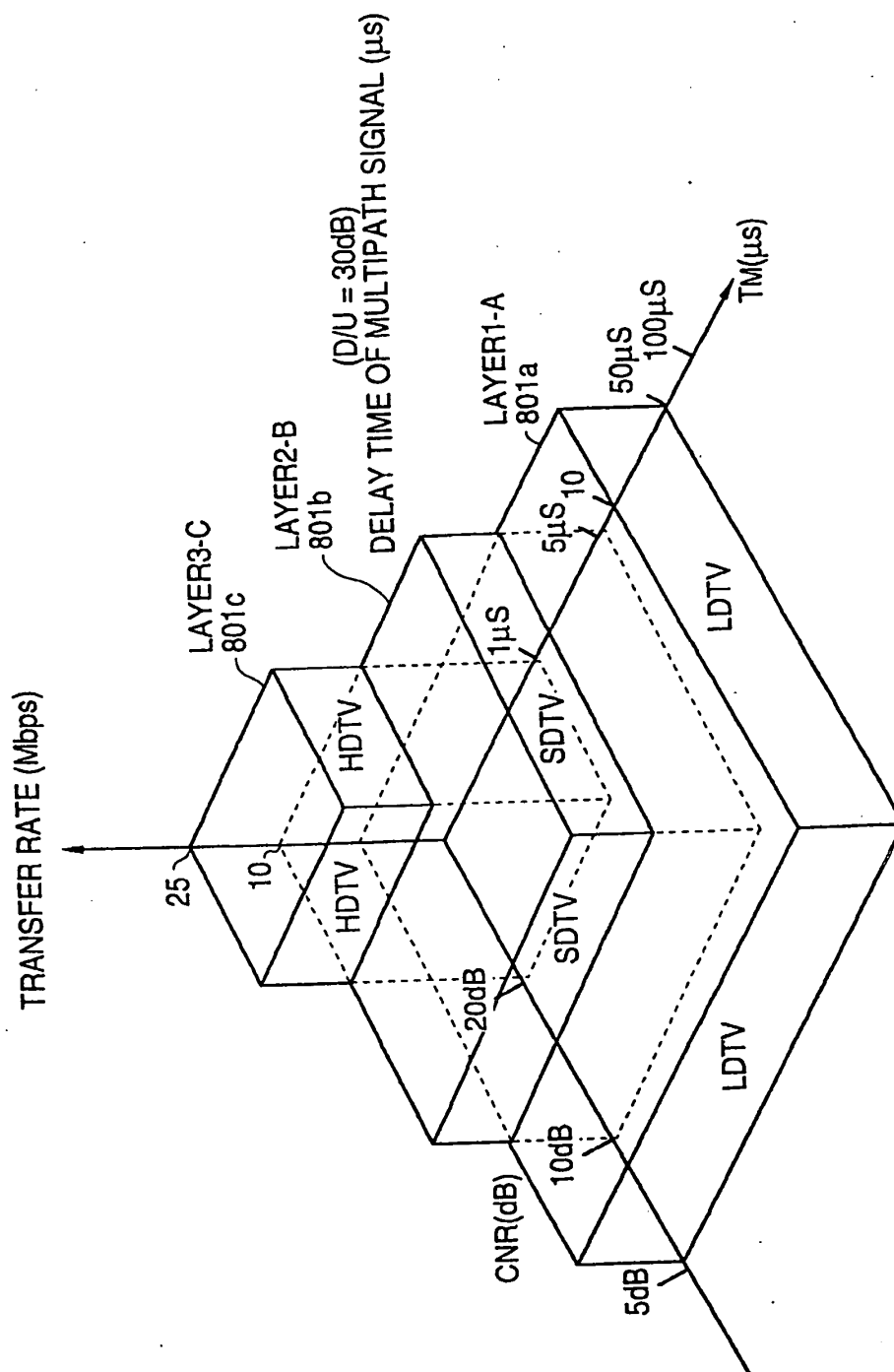


FIG. 152





**FIG. 153**



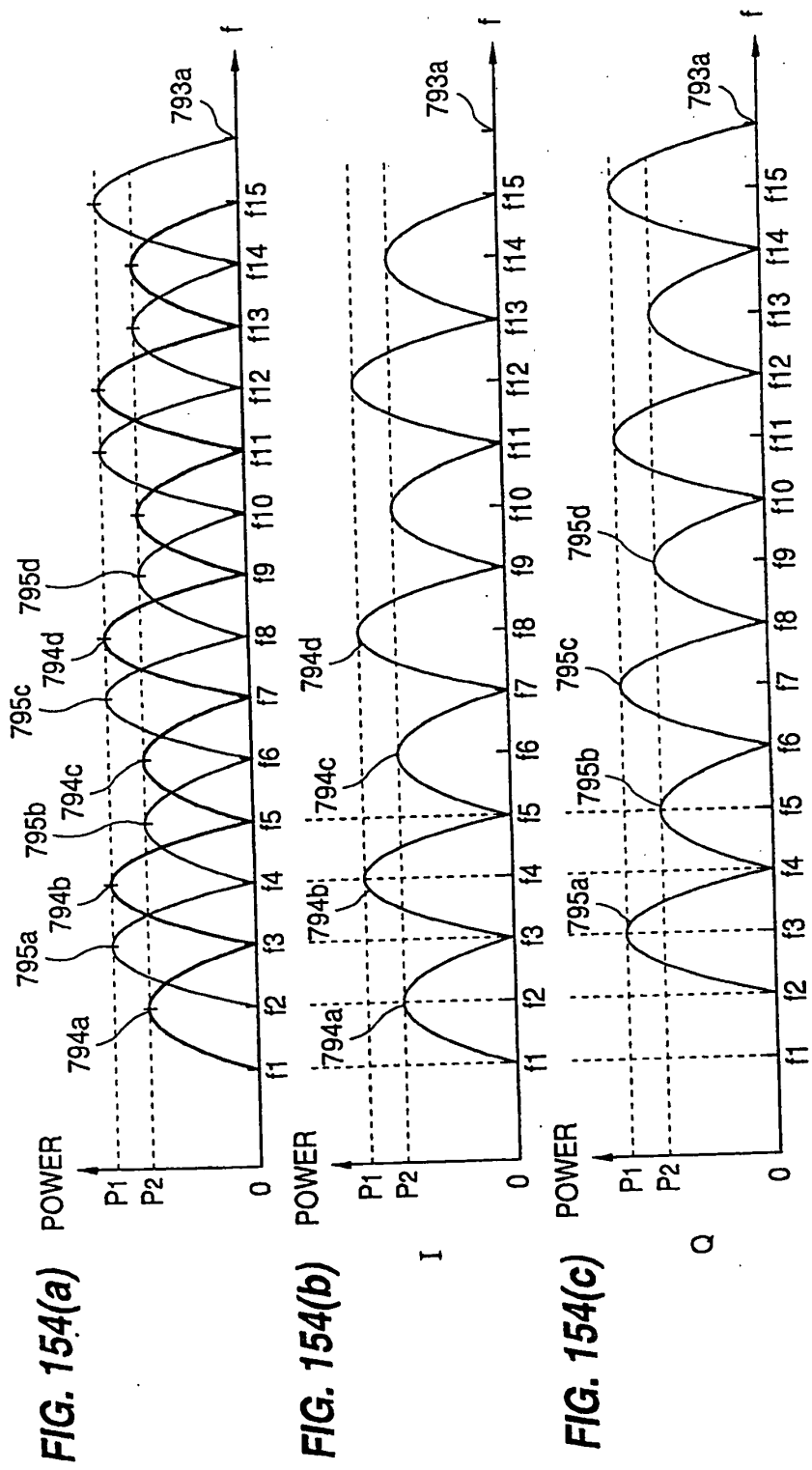


FIG. 155

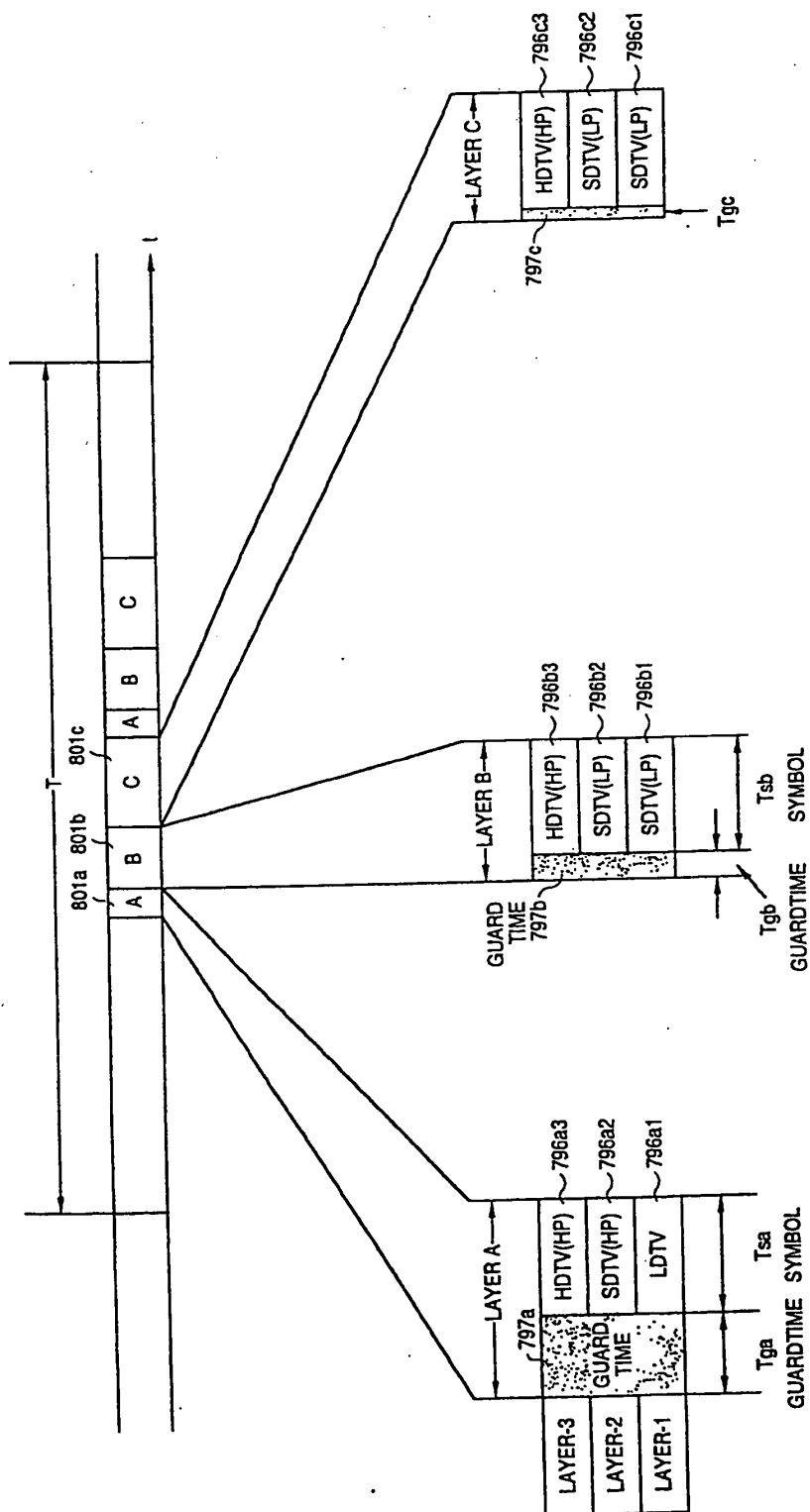


FIG. 156

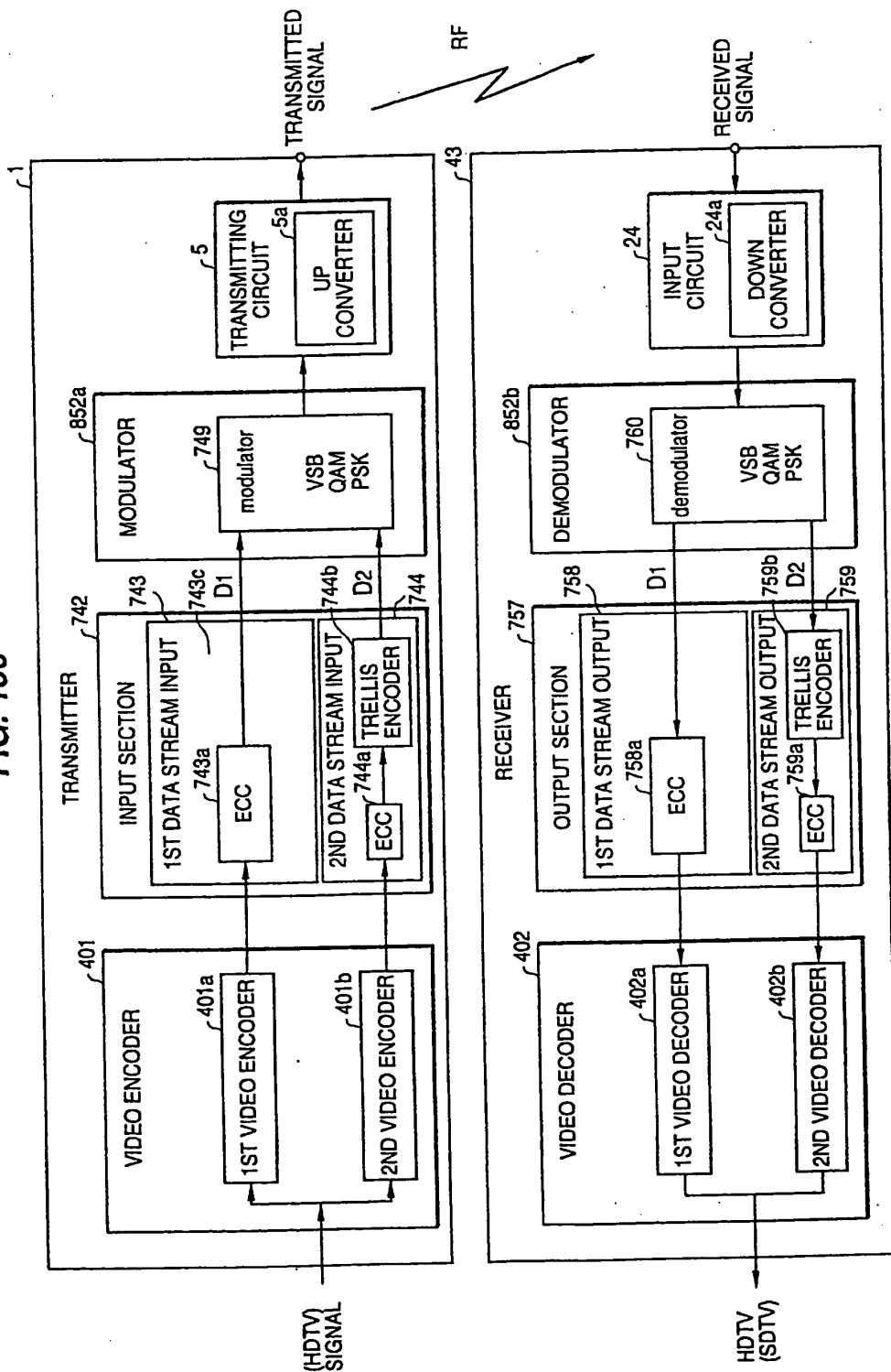


FIG. 157

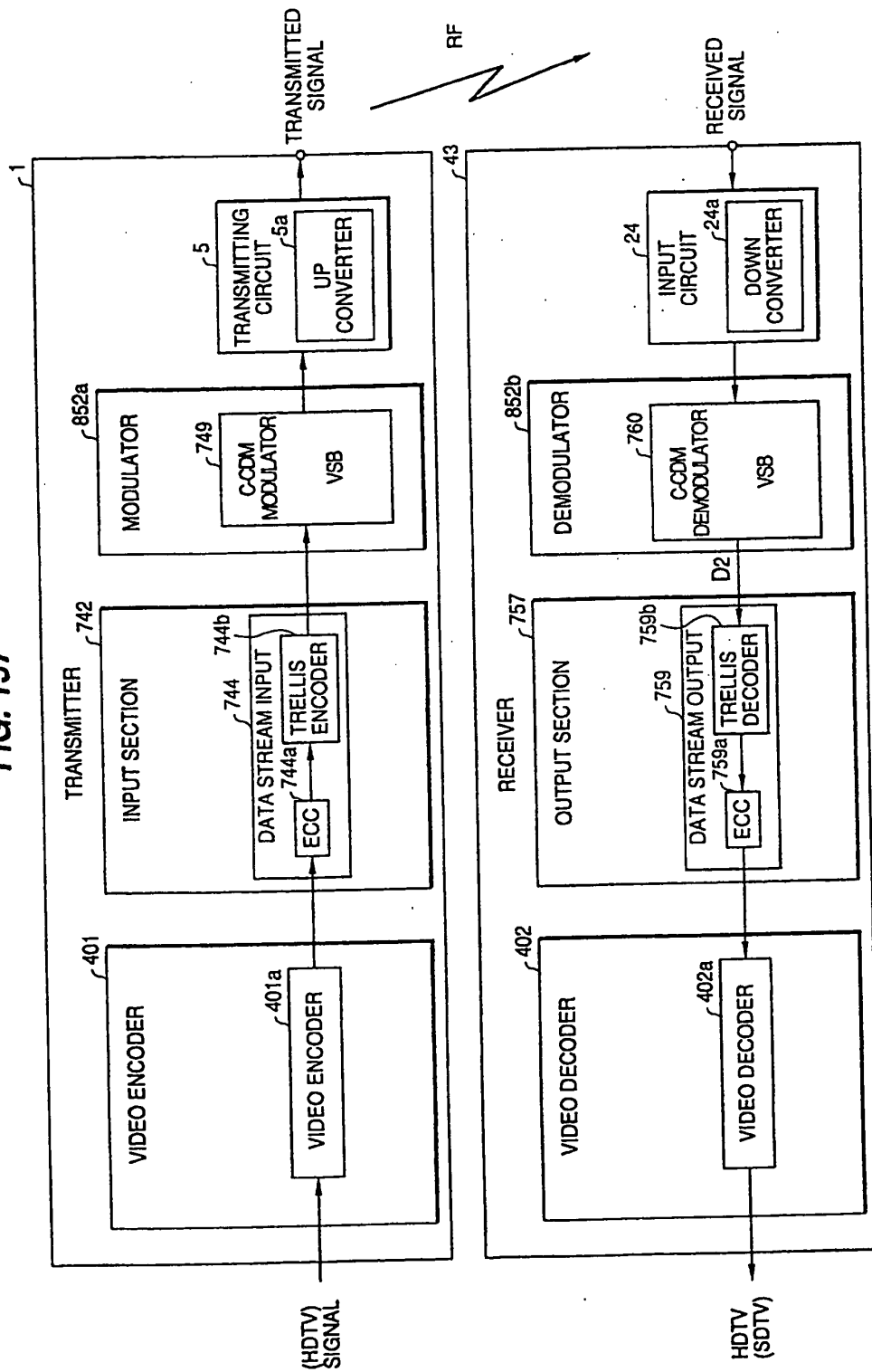
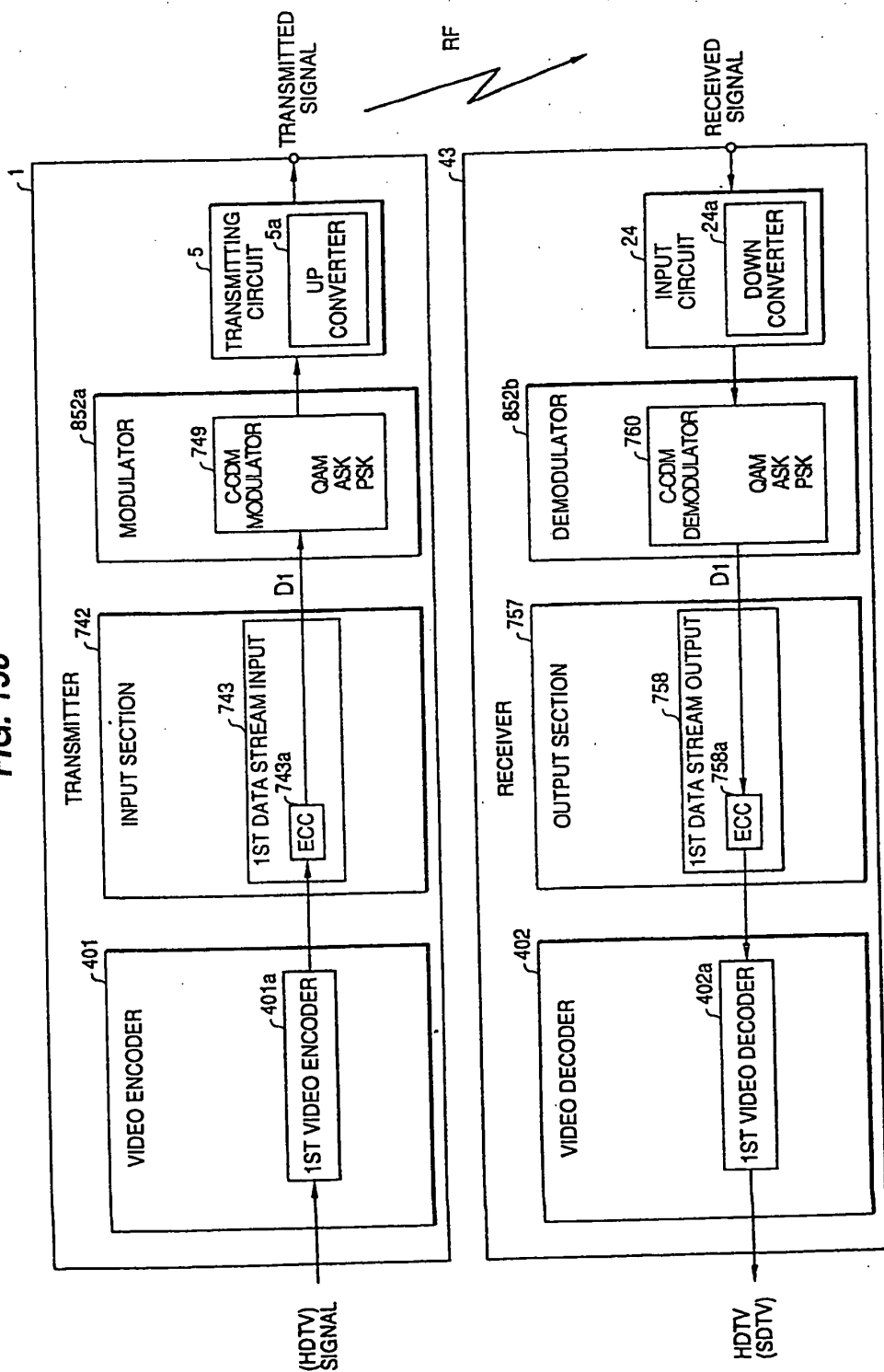


FIG. 158



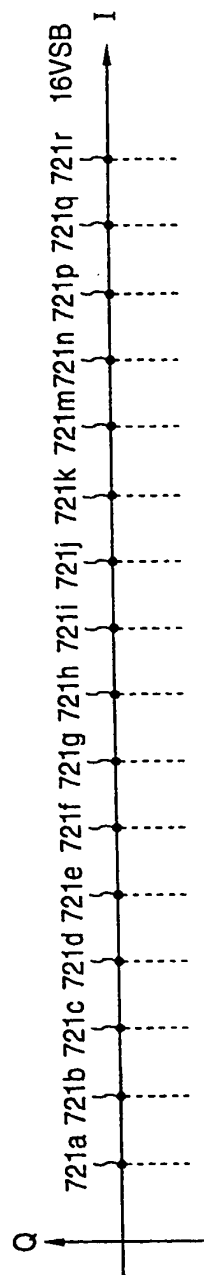


FIG. 159(a)

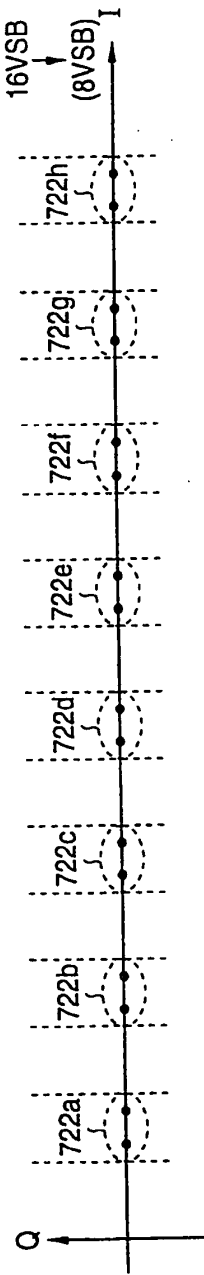


FIG. 159(b)

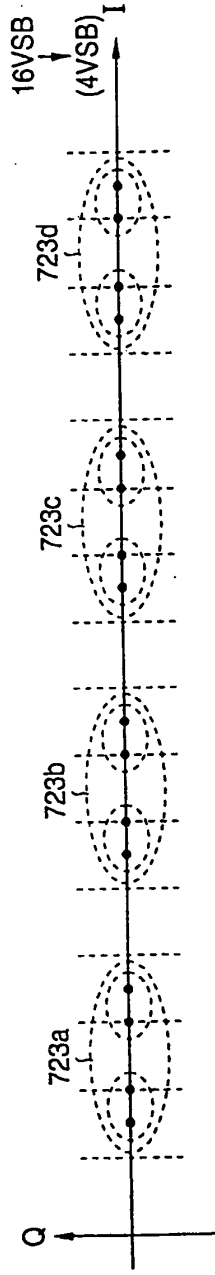


FIG. 159(c)

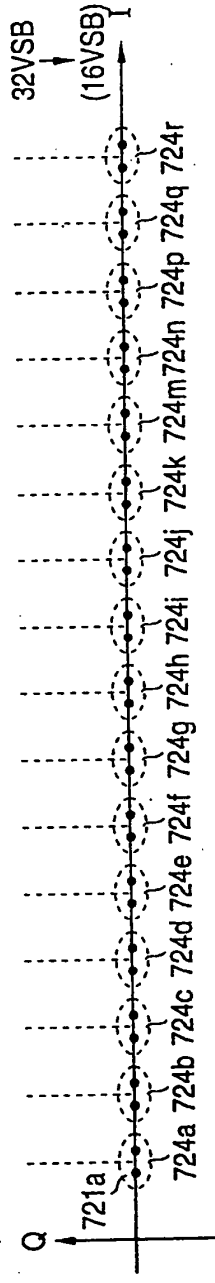


FIG. 159(d)

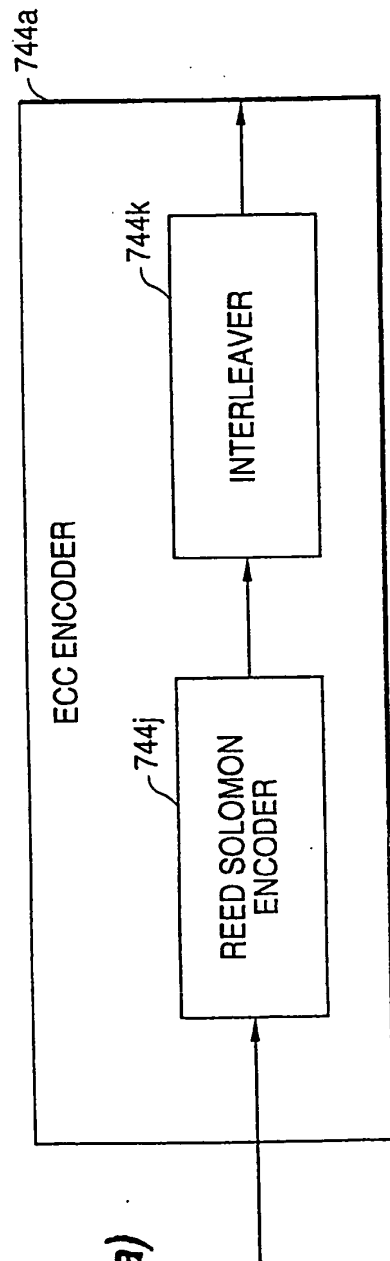


FIG. 160(a)

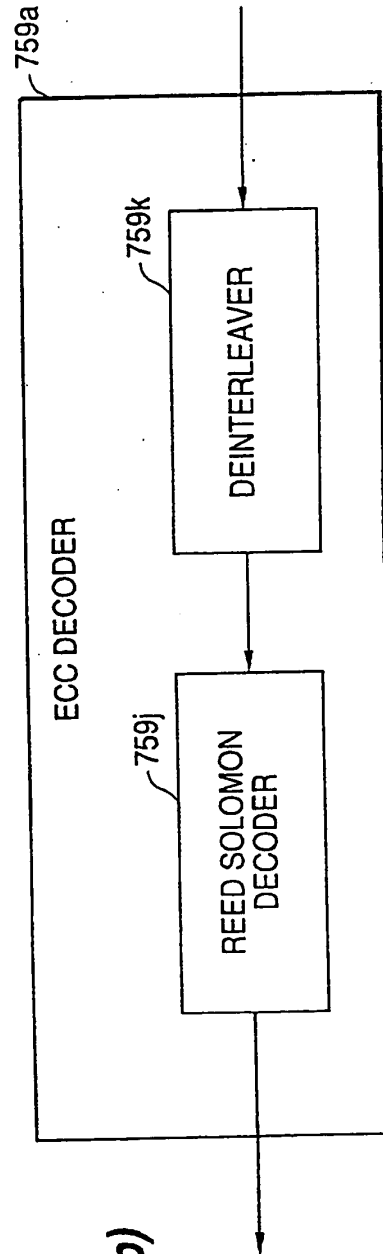


FIG. 160(b)



FIG. 161

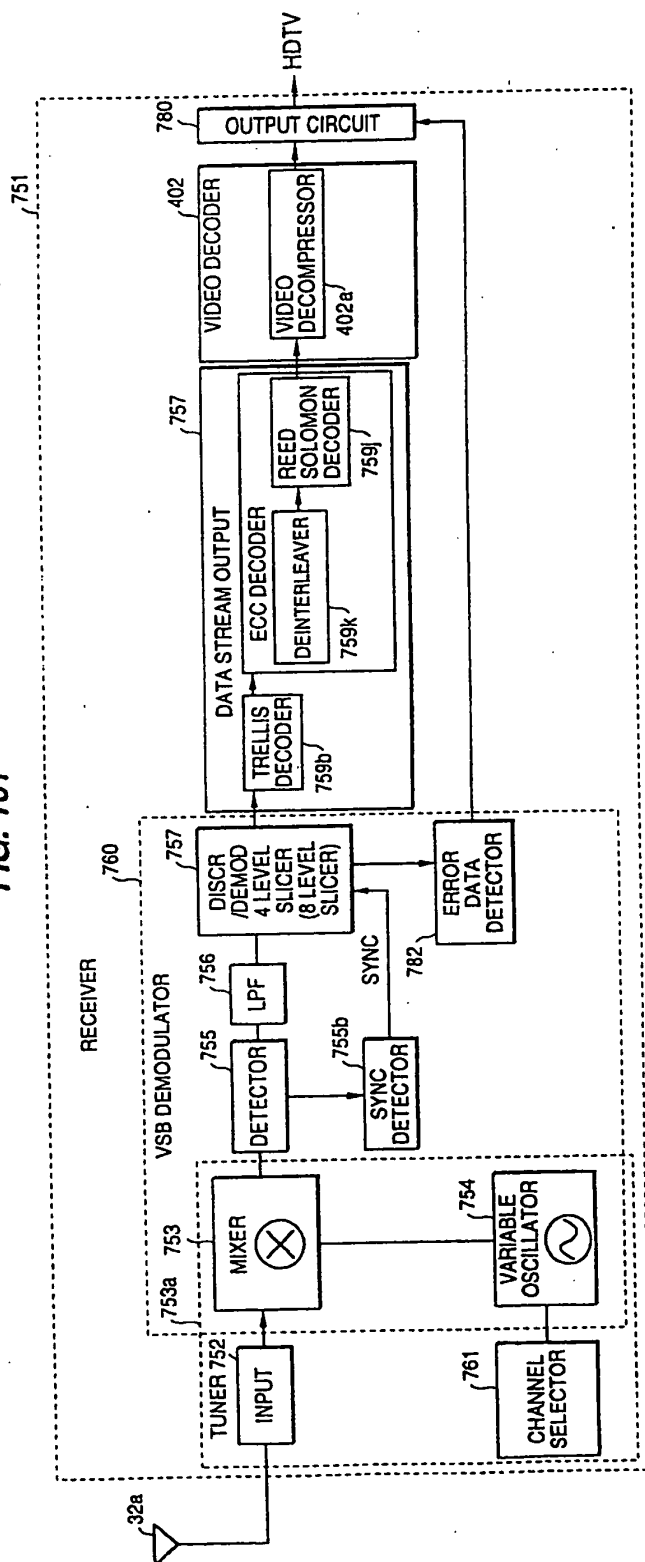


FIG. 162

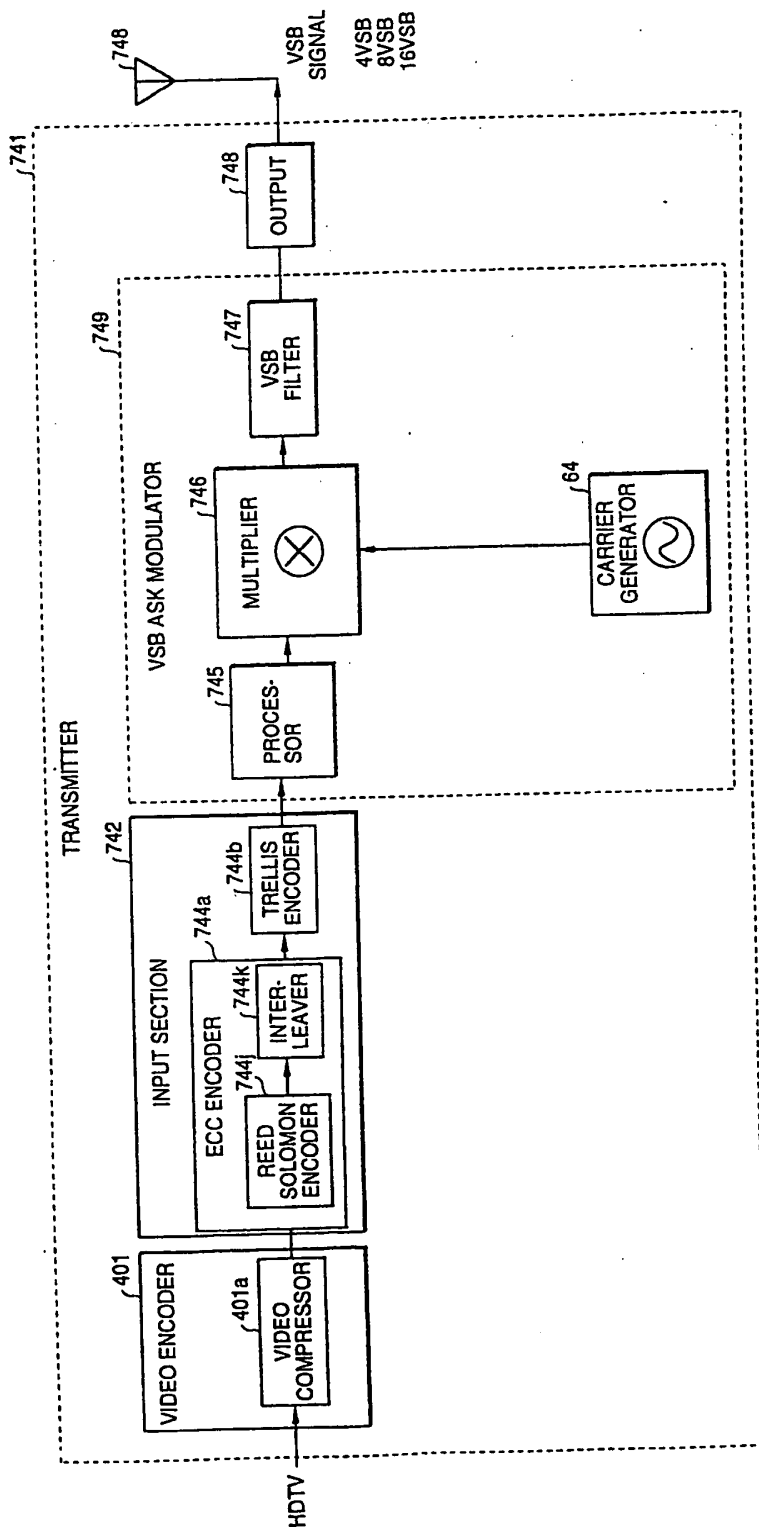


FIG. 163

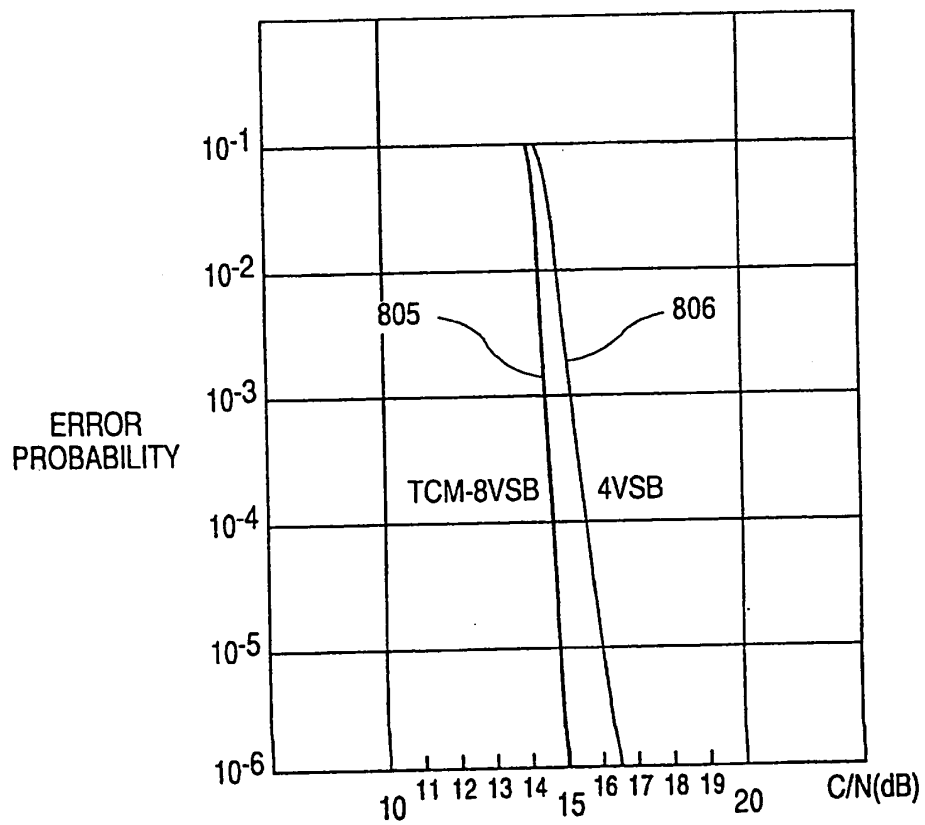
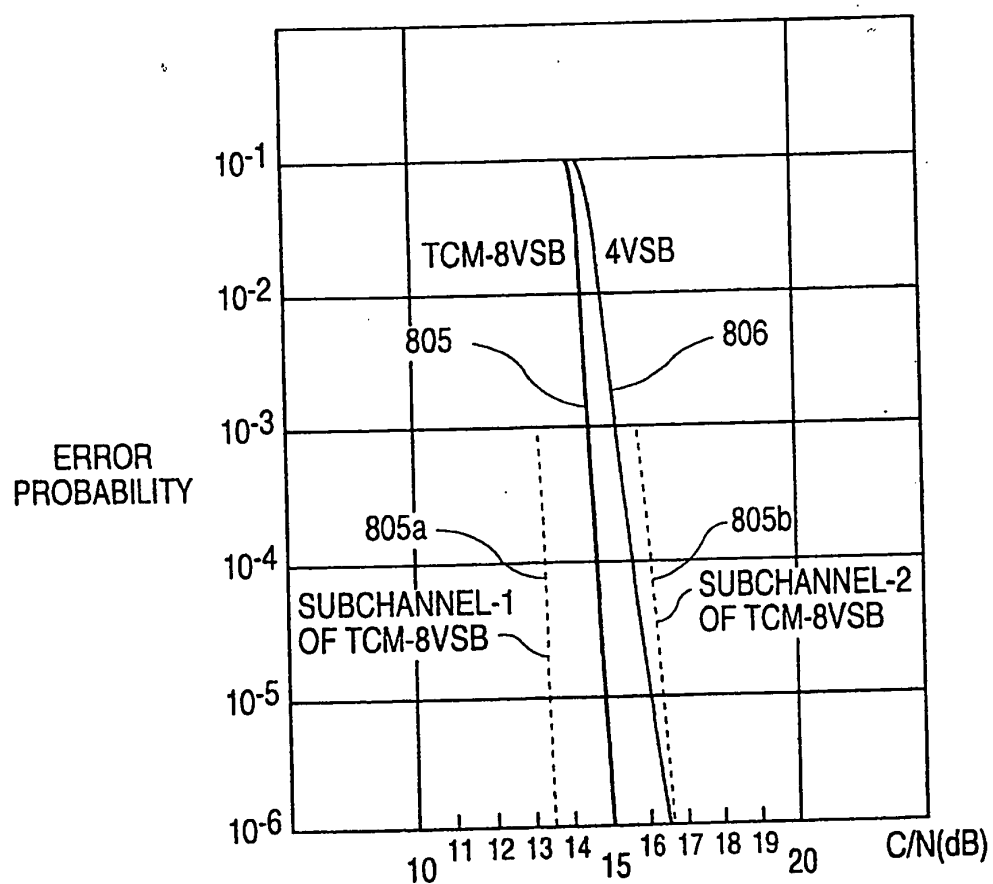
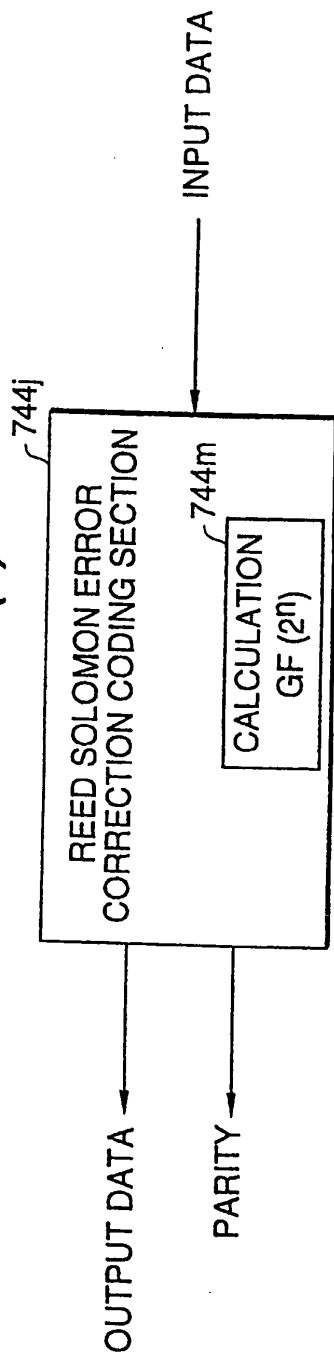


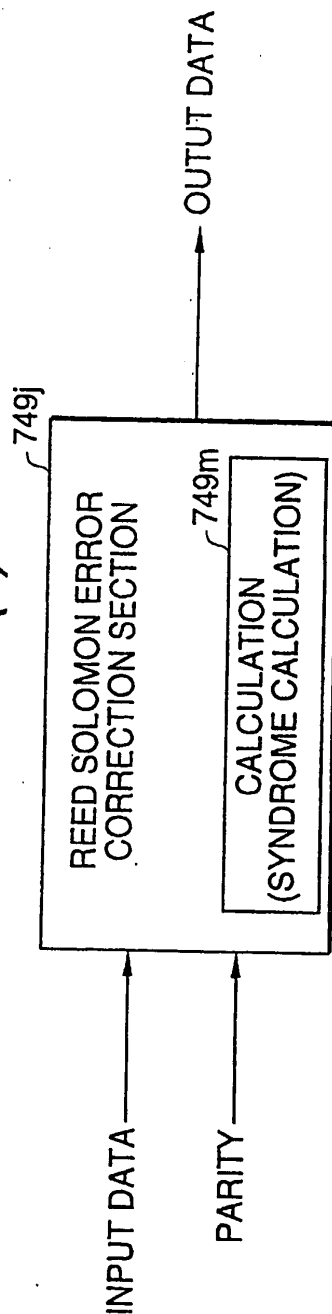
FIG. 164



**FIG. 165(a)**



**FIG. 165(b)**



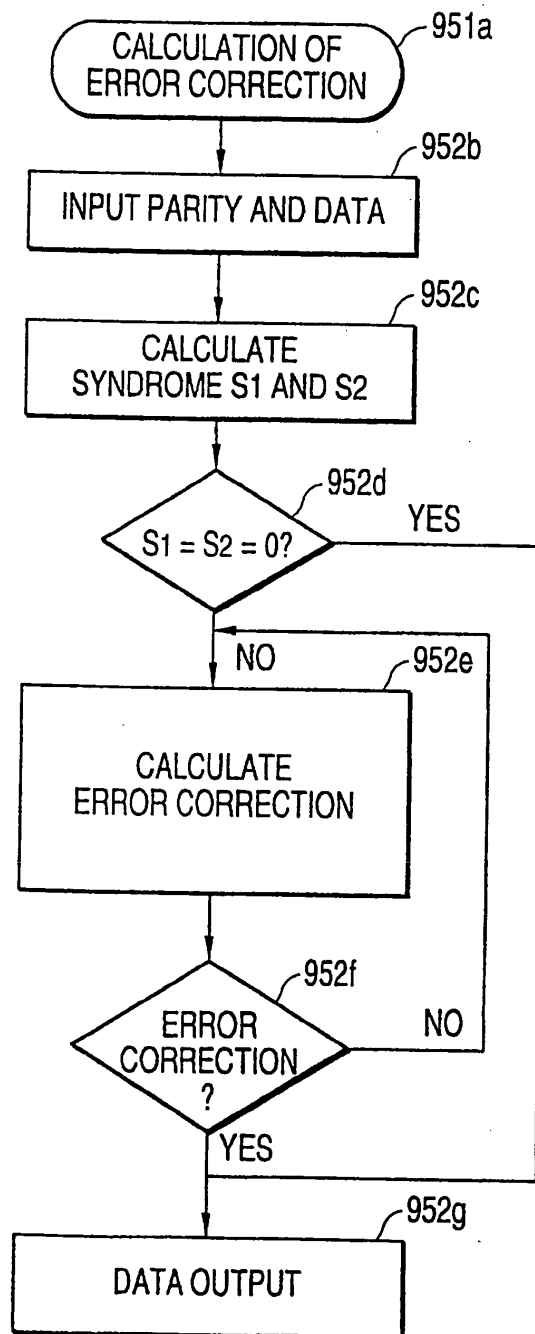
**FIG. 166**

FIG. 167

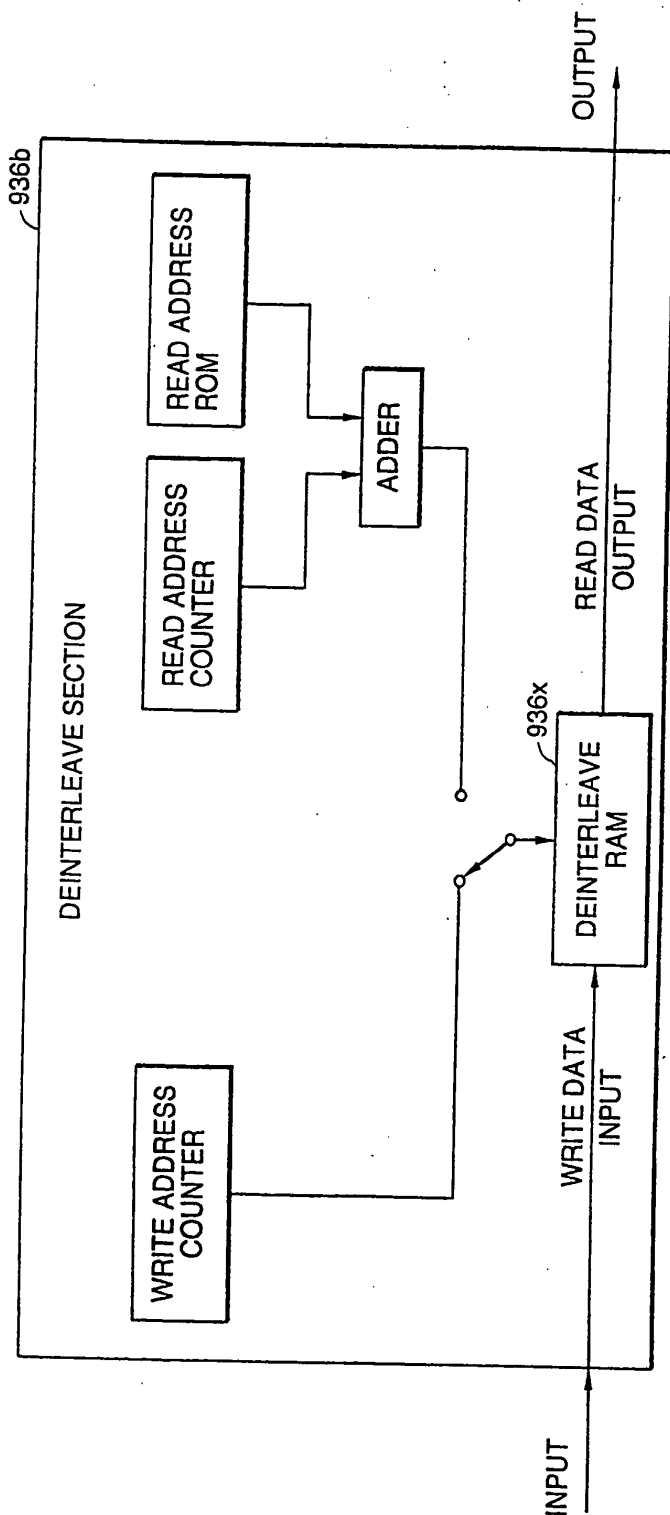


FIG. 168(a)

INTERLEAVE TABLE

1	2	3	4	5	6	7
DATA						C2 PARITY
1	A 1	A 2	A 3	A 4	A 5	A 6
2	B 1	B 2	B 3	B 4		
3	C 1					
4	D 1					
5	E 1					
6	F 1					
C1 PARITY	PARITY	PARITY	PARITY	PARITY	PARITY	PARITY

951b points to the first column of data (A 1 to F 1).  
951a points to the C2 PARITY column.  
954 points to the C2 PARITY header.  
953 points to the C1 PARITY row.

FIG. 168(b)

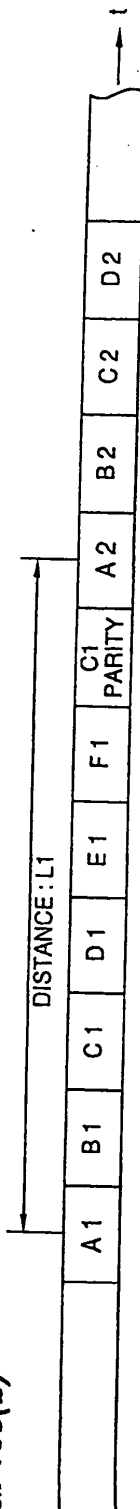




FIG. 169

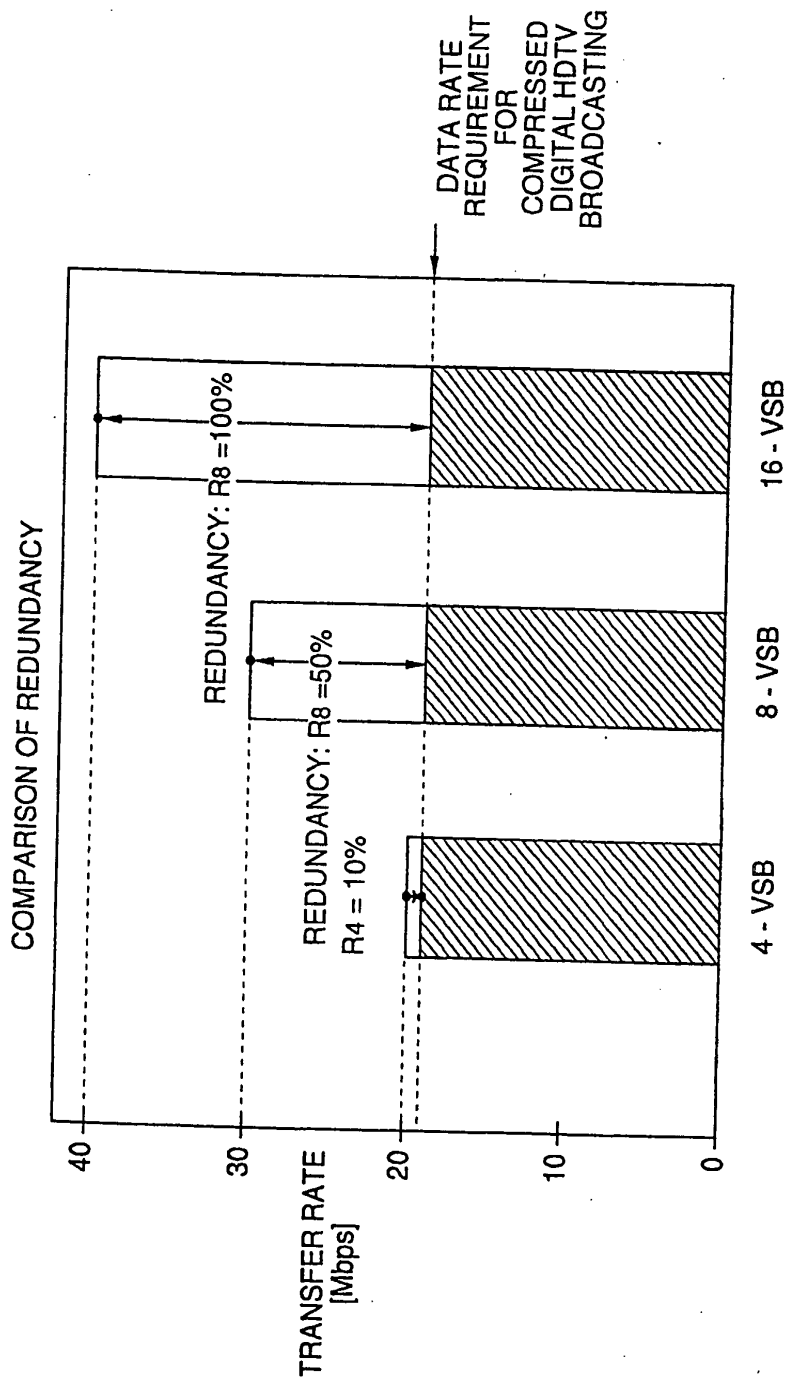


FIG. 170

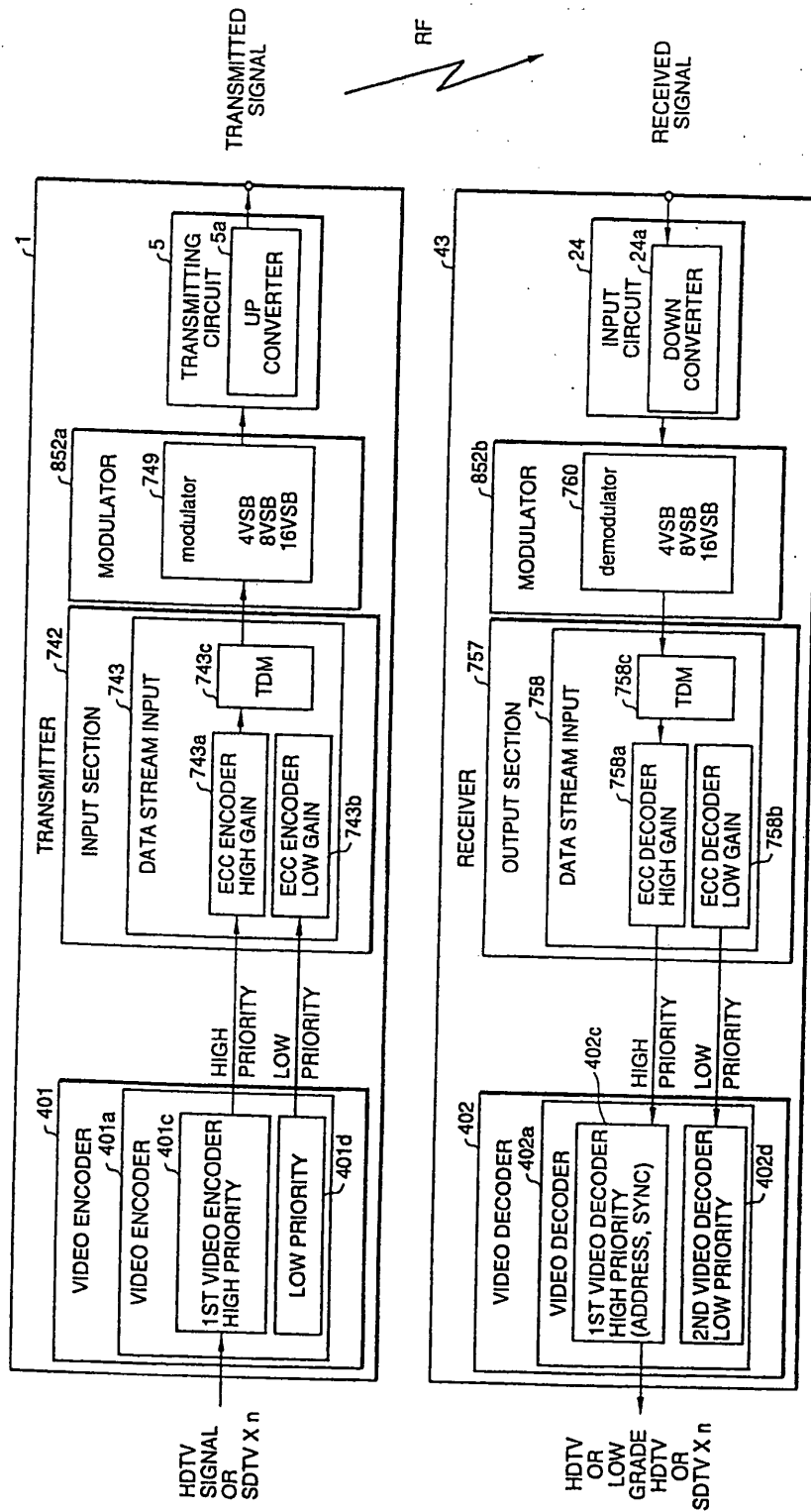


FIG. 171

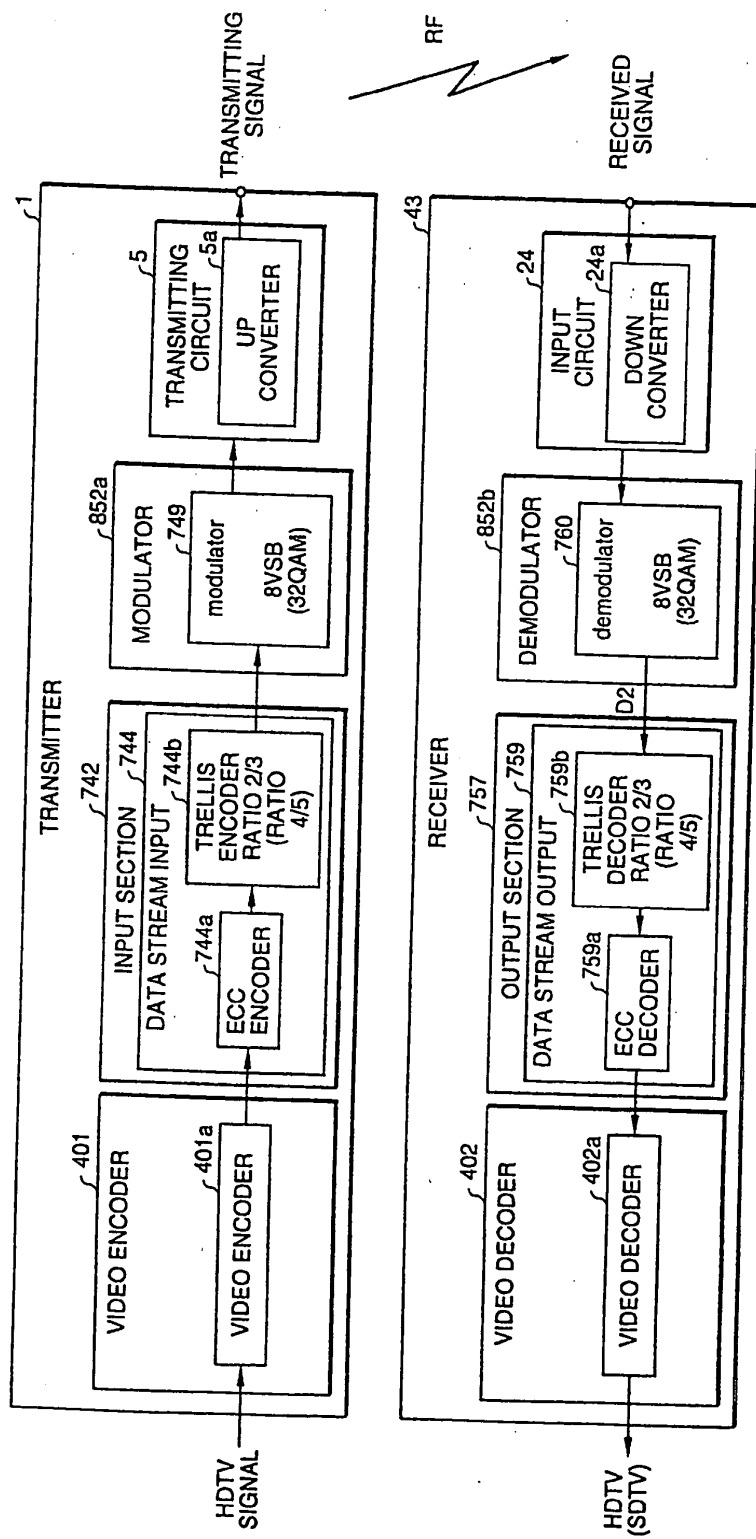


FIG. 172

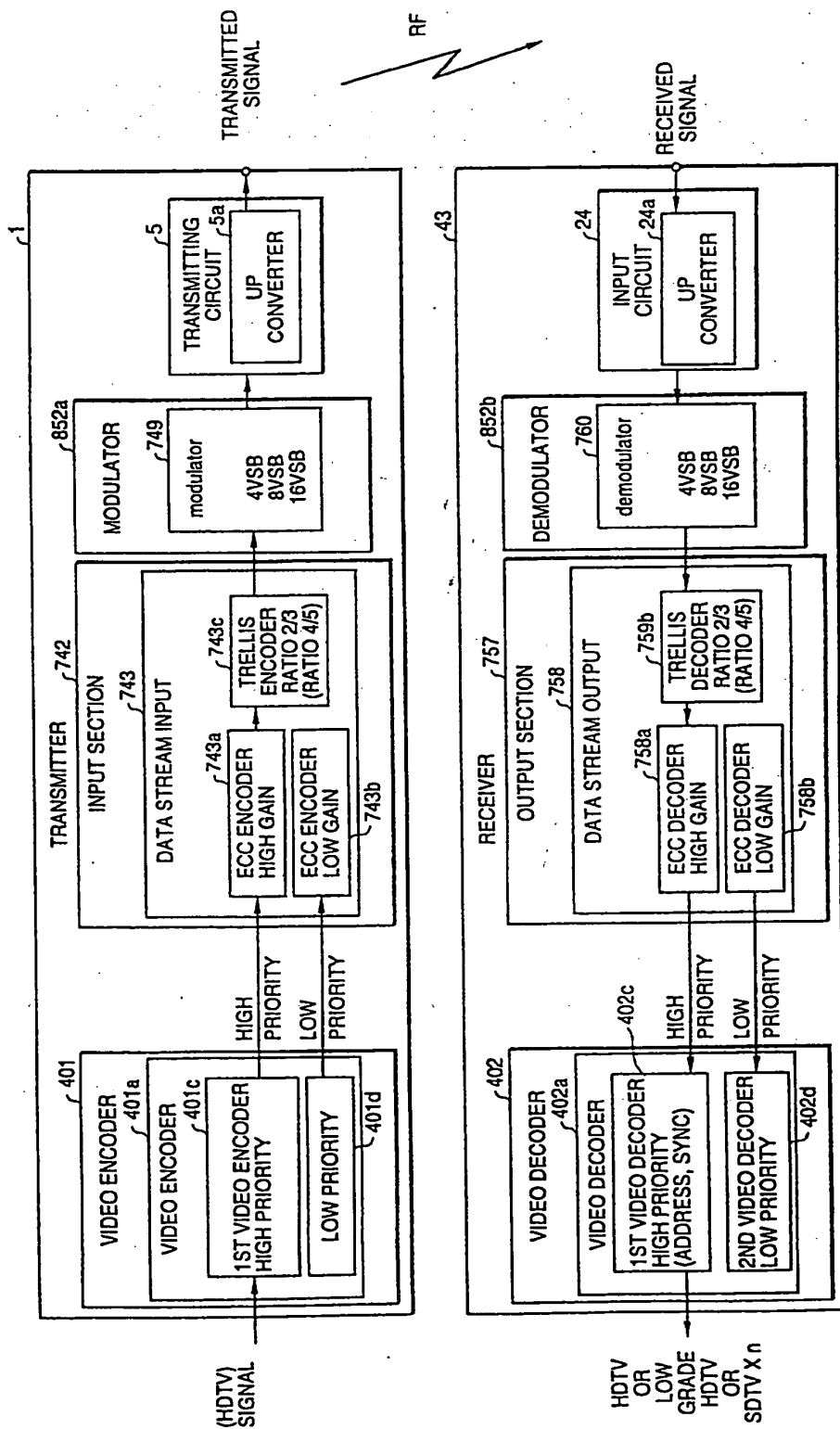


FIG. 173

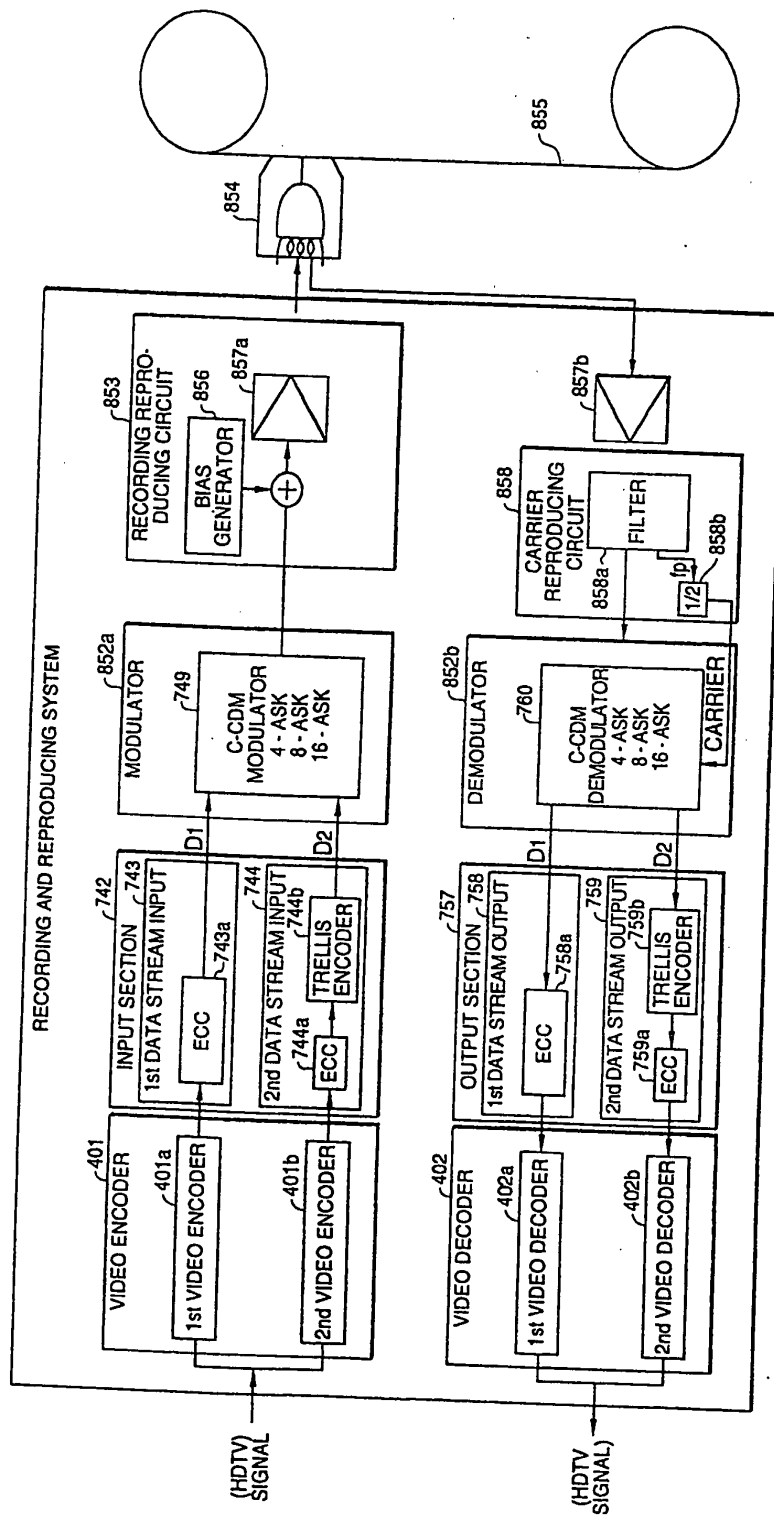


FIG. 174

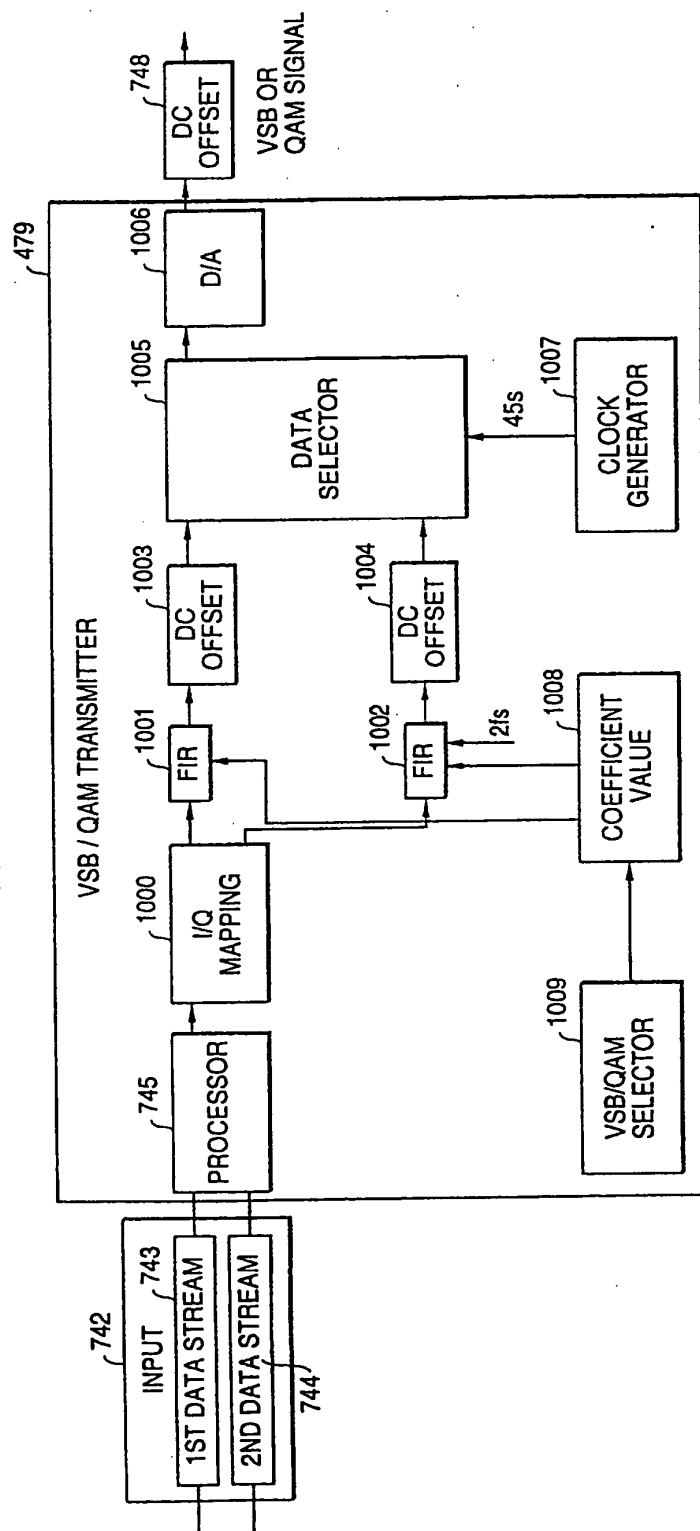


FIG. 175

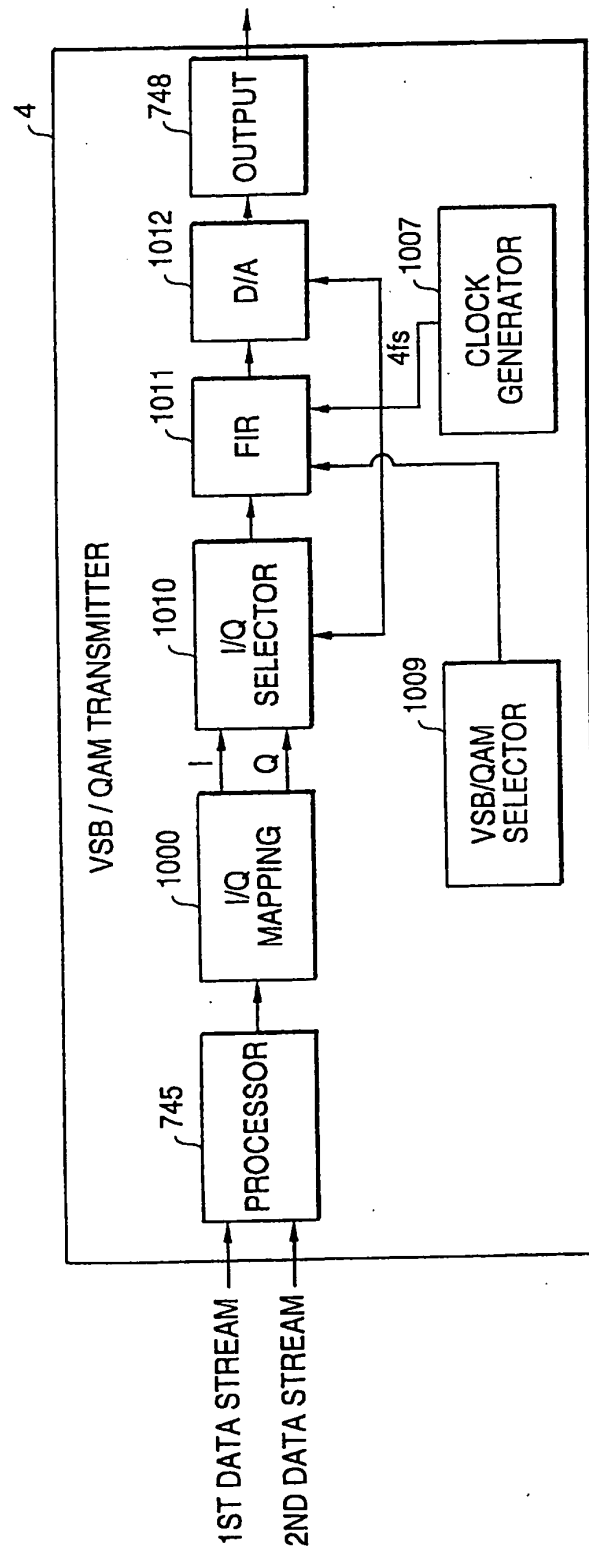


FIG. 176

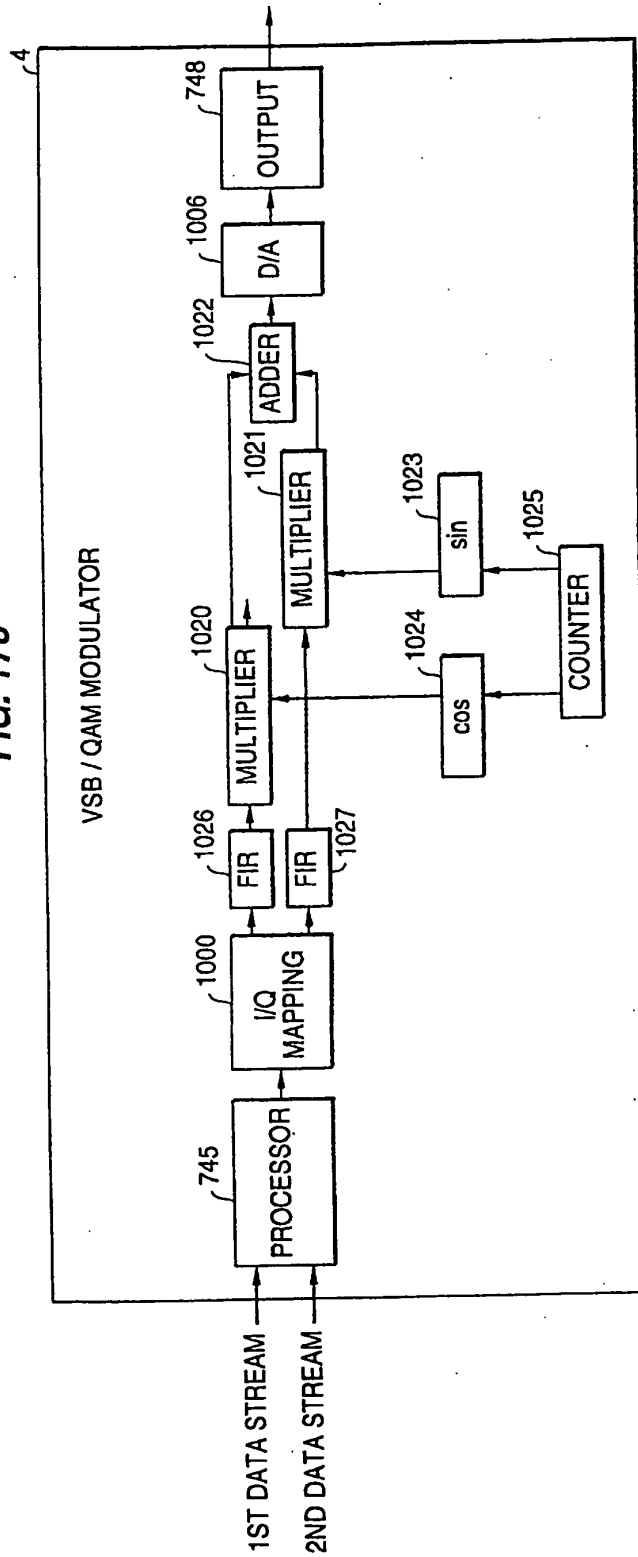




FIG. 177

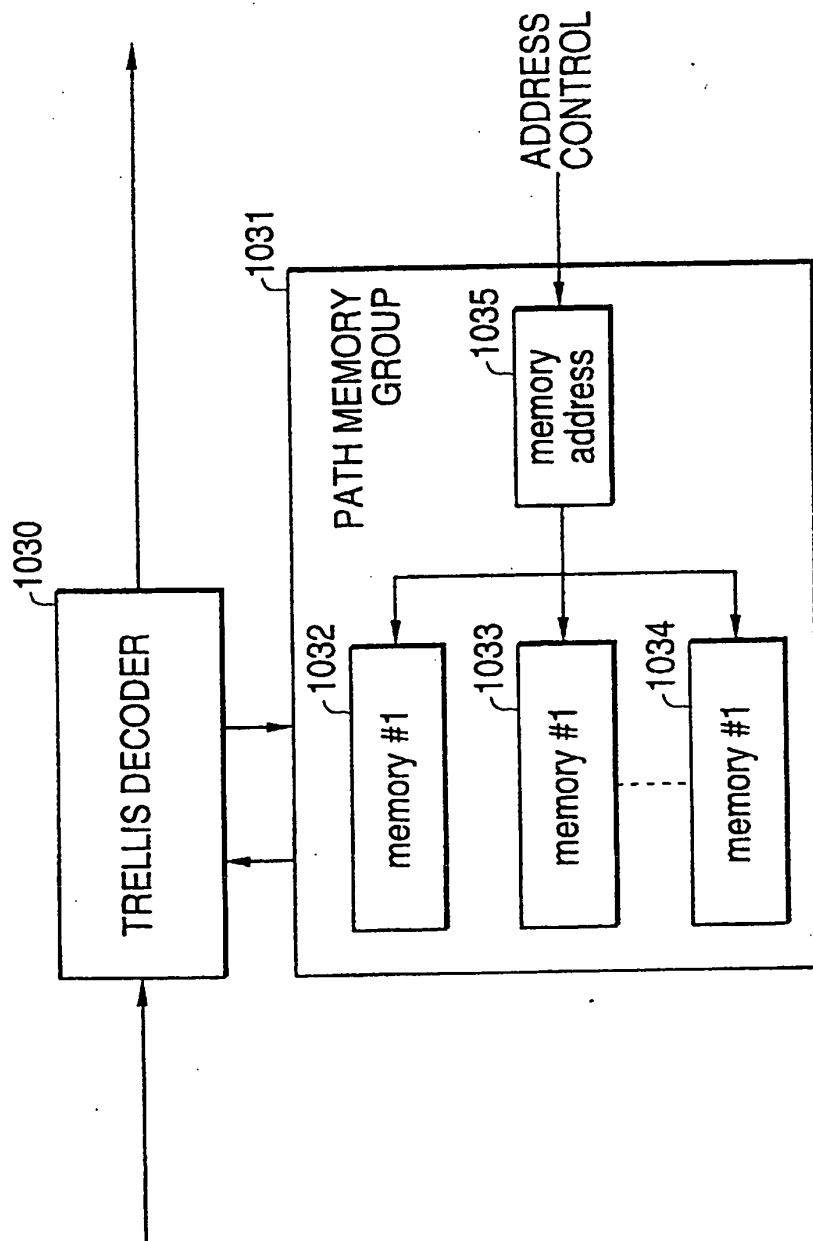


FIG. 178

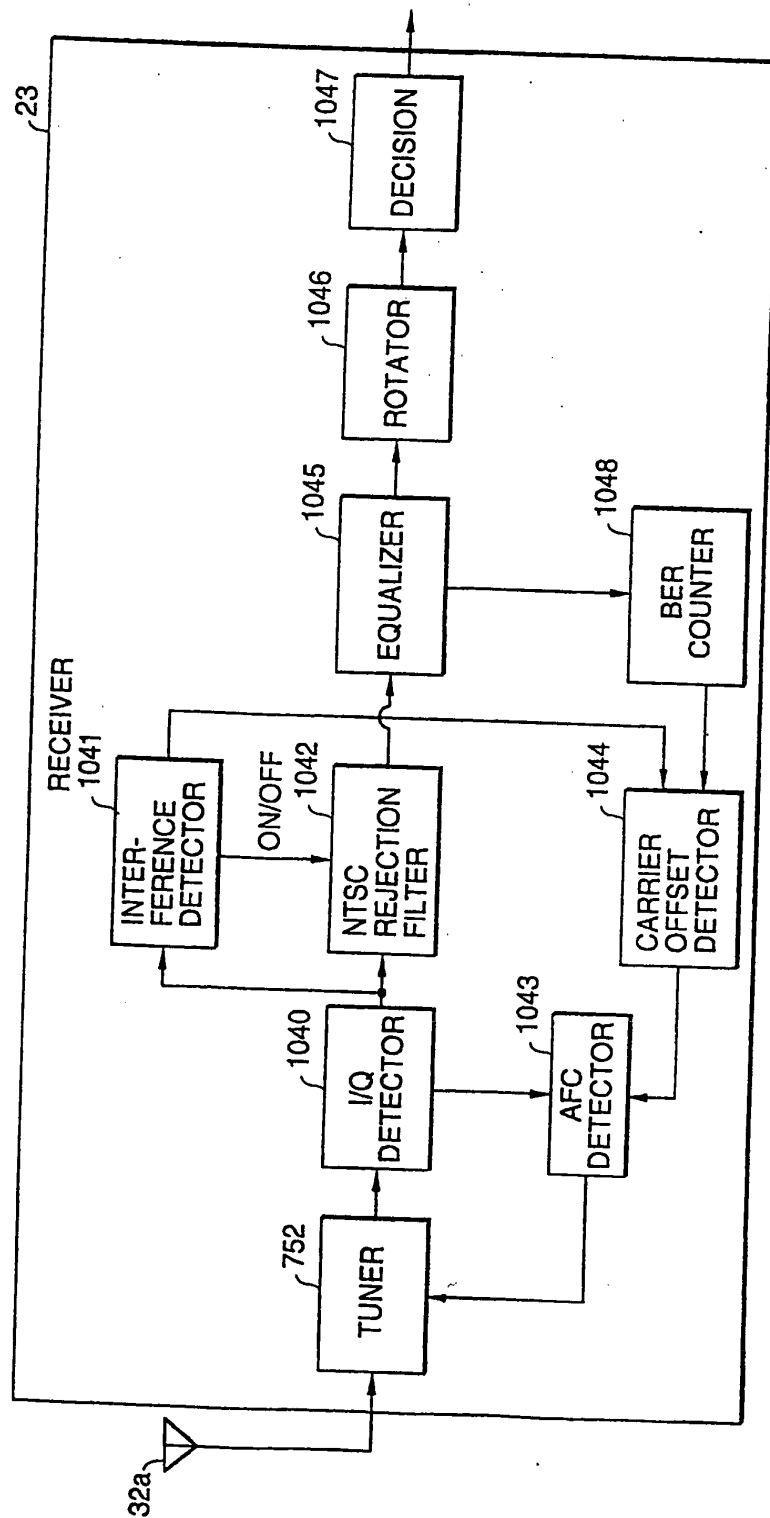


FIG. 179

